LIBRARY OF THE UNIVERSITY
OF ALBERTA

13 JUL 1953

ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

OF THE

PROVINCE OF ALBERTA

FOR THE YEAR

1948

A

PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

S
135
A33
1948

SCI

EDMONTON:
PRINTED BY A. SHNITKA, KING'S PRINTER
1949

Ex Libris
Universitatis
Albertaensis

Agr. S
135
.A33
1948

ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

OF THE

PROVINCE OF ALBERTA

FOR THE YEAR

1948

PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

EDMONTON:
PRINTED BY A. SHNITKA, KING'S PRINTER
1949

TABLE OF CONTENTS

	Page
Report of the Deputy Minister	6
Annual Report of the Field Crops Branch	8
Report of the Live Stock Branch	36
Report of the Dairy Branch	52
Report of the Poultry Branch	74
Report of Agricultural Extension Service	82
Report of the Veterinary Services Branch	108
Report of Fur Farms Branch	123
Report of Apiculture Branch	128
Report of the Schools of Agriculture Branch	132
Report of School of Agriculture and Home Economics, Olds	134
Report of School of Agriculture, Vermilion	139
Report of Junior Activities and Youth Training	147
Report of Relief Settlement Branch	154
Report of Provincial Horticultural Station, Brooks	155
Report of the Surplus Wheat Board Money Trust	160

LIBRARY OF THE UNIVERSITY
OF ALBERTA

DEPARTMENT OF AGRICULTURE
1948

HON. D. A. URE, *Minister of Agriculture*

Heads of Branches

O. S. Longman, Deputy Minister and Superintendent, Schools of Agriculture and Home Economics.

A. M. Wilson, Field Crops Commissioner.

A. A. Campbell, Live Stock Commissioner.

D. H. McCallum, Dairy Commissioner.

Dr. E. E. Ballantyne, Director of Veterinary Services.

D. R. Fraser, Fur Farm Supervisor.

W. G. leMaistre, Provincial Apiarist.

F. N. Miller, Principal, School of Agriculture and Home Economics, Olds.

C. W. Traves, Poultry Commissioner.

R. M. Putnam, Director of Extension.

N. N. Bentley, Principal, School of Agriculture, Vermilion.

G. S. Black, Supervisor, Junior Activities and Youth Training.

E. B. Swindlehurst, Acting Supervisor, Relief Settlement Branch.

P. D. Hargrave, Superintendent, Brooks Horticultural Station.

147032

To His Honour,
J. C. BOWEN,
Lieutenant Governor of the Province of Alberta.

SIR:

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1948.

I have the honour to be, Sir,

Your obedient servant,

D. A. URE,
Minister of Agriculture.

REPORT OF THE DEPUTY MINISTER
(O. S. Longman)

THE HONOURABLE D. A. URE,
Minister of Agriculture.

SIR:

I have the honour to submit herewith the forty-second annual report of the Alberta Department of Agriculture for the year ending December 31st, 1948. This report includes a review of the agricultural industry of Alberta during the past year as contained in the reports of the various departmental branches, also detailed outlines of the work being performed by the various divisions of the Department.

The services and personnel of the Department continued to expand. During the year the technical personnel has been increased by the addition of trained and qualified persons, which includes the appointment of: J. G. O'Donoghue, V.S., D.V.M. and C. H. Bigland, V.S., D.V.M. to the staff of the Veterinary Services Branch; also Miss C. Judson, B.H.E., who has assumed the duties of Home Designing Specialist under the Extension Service Branch.

Mr. John Keith, Supervisor of Fur Farms and who had rendered most efficient service to the fur farmers of the Province since 1942, retired on June 30th. The vacancy was filled by Mr. D. R. Fraser, who had previously occupied the position of Assistant Supervisor of Fur Farms.

We regret to announce, due to ill health, the retirement on superannuation of Mr. S. H. Gandier, Superintendent of Schools of Agriculture. During his twenty-six years of service with the Department Mr. Gandier had been associated with the Schools of Agriculture and other important offices in the Department and rendered faithful and efficient service.

Mr. P. D. Hargrave, Superintendent of the Provincial Horticultural Station at Brooks, was awarded a British Council Scholarship enabling him to study for a year at Wye College, University of London, and was granted leave of absence so as to pursue studies pertaining to Horticulture at the aforementioned Institution. Mr. P. D. McCalla was appointed as Horticulturist in the Field Crops Branch, but inasmuch as Mr. Hargrave was granted leave of absence, he has been appointed Acting Superintendent of the Horticultural Station during Mr. Hargrave's absence.

Mr. H. J. Mather, Supervisor of Soil Conservation and Weed Control, left the service on March 31st, to take a position with the North-West Line Elevators Farm Service in Winnipeg. Mr. Mather joined the service in 1942. Mr. E. B. Martin, Extension Agricultural Engineer, resigned his position with the Extension Branch to accept a position in the commercial field.

The efforts of the Department have been directed toward aiding the rural community through education, demonstrations, co-operation and the promotion of self help to realize and enjoy agricultural stability. Policies and programs have been designed to emphasize the importance of soil and water conservation, farm management, weed control, live stock improvement, plant and animal diseases and pests in successful farming and the use of the soil.

During the year the Department has been pleased to call upon the officers and staff members of the Dominion Department of Agriculture, the Faculty of Agriculture of the University, as well as the personnel from other official and non-official organizations to assist in developing and implementing its programs and policies. It is a pleasure gratefully to acknowledge the Department's indebtedness to those who have participated for the service so willingly and generously rendered.

I wish to take this opportunity to express my appreciation to the officers and staff of the Department for their loyal support and their devotion to duty. Without the generous support rendered the accomplishments of the past year could not have been attained.

Yours respectfully,

O. S. LONGMAN,
Deputy Minister.

ANNUAL REPORT FIELD CROPS BRANCH

A. M. WILSON, Commissioner
G. R. STERLING, Soil Conservation and Weed Control
J. E. BIRDSALL, Crop Improvement
W. LOBAY, Crop Protection

GENERAL

The acreage of the major grain crops declined 6% for each of wheat and oats and 5% for barley from the preceding year. This decrease was due to the late spring accompanied by extremely wet soil during late April and early May. The rye acreage was doubled principally because of the high prevailing price of the previous year's crop. The acreages of minor crops on the whole showed decreases varying from 5 to 15%.

In spite of the late planting season crops progressed rapidly and matured with limited damage from frost except in the Peace River block. A long open fall made possible the complete harvesting and threshing of crops with relatively small quantities of damp or tough grain being delivered to elevators. Some difficulty was experienced in handling forage seeds being delivered for cleaning at central cleaning plants. Because of the large quantity of seed produced and the ideal harvesting weather storage and cleaning facilities were not able to handle the crop as it was harvested and some shipments could not be accepted until cleaned seed in the plants could be moved to export and eastern markets.

Yields per acre of wheat in spite of the late planting season exceeded the 27-year averages by 1.4 bushels per acre. Oats yields were .6 bushels per acre less than the average over the same period and barley was just .2 bushels above average. Flax yields averaged 11.5 bushels per acre which was 3.5 bushels over the normal crop.

The following table shows crop acreages, yields and production of major crops in 1948 as compared with 1947 and the long time average.

CROP	1947 Acres	1948 Acres	1947 bus. per Acre	1948 bus. per Acre.	Long Term Avge.	1947 Bushels	1948 Bushels
Spring Wheat	6,634,000	6,259,000	15.5	18.4	17.0	103,000,000	115,000,000
Oats	2,534,000	2,392,000	29.6	31.4	32.0	75,000,000	75,000,000
Barley	2,354,000	2,226,000	22.1	24.7	24.5	52,000,000	55,000,000
Fall Rye	197,000	400,000	14.7	18.5	13.5	2,900,000	7,400,000
Spring Rye	131,000	212,000	10.3	11.8	11.9	1,350,000	2,500,000
All Rye	328,000	612,000	13.0	16.2	12.9	4,250,000	9,900,000
Peas Dry	18,500	14,500	12.0	14.3	14.3	222,000	207,000
Mixed Grain	16,300	41,600	22.0	25.5	26.9	359,000	1,061,000
Flax Seed	257,000	218,000	8.4	11.5	8.0	2,150,000	2,500,000
Potatoes	24,500	22,800	cwt. 80.0 tons	cwt. 89.0 tons	cwt. 82.7 tons	cwt. 1,960,000 tons	cwt. 2,029,000 tons
Hay and Clover	696,500	665,000	1.4	1.5	1.3	975,000	1,017,000
Alfalfa	223,500	217,000	2.0	1.8	2.2	447,000	391,000
Fodder Corn	900	400	4.2	4.5	4.2	4,000	2,000
Grain Hay	850,000	800,000	1.5	1.4		1,275,000	1,120,000
Sugar Beets	29,300	28,200	12.5	11.4	11.1	366,000	323,000

The heavy snows of February, March and early April provided excessive soil moisture at planting time in spite of a heavy run-off which cut field gulleys and filled sloughs to overflowing. Following the wet season which delayed planting into

late May and early June the weather became hot and the surface soil dried to such an extent that germination in spring-cultivated fields was delayed and uneven. Near drought conditions prevailed except in south-western areas during the later part of June and early July. Sufficient rain fell in July and August to produce a slightly better than normal crop.

Crop losses were light from hail and frost except in the Peace River district where damaging frosts occurred on August 23rd. Oat crops were most seriously damaged and good seed oats will be difficult to obtain for spring planting from within the area. Drought conditions again prevailed in south-eastern Alberta and it is anticipated that approximately 600 townships will receive assistance under the Prairie Farm Assistance Act because of average crop yields of less than 8 bushels per acre.

Rape seed crops attracted attention at the close of the year mainly because of publicity given to them as a possible source of oil for use in the manufacture of margarine.

Grass and legume seed crops were largest in history mainly because of the excessively wet spring followed by warm dry weather at flowering time. Hay crops were for the most part excellent. Over 1,000 carloads of baled hay were shipped to the flooded areas of British Columbia. Adequate and possibly reserve supplies will be available for winter feed or to safe-guard the live stock industry should dry weather prevail in the ensuing year.

Drastic fodder shortages occurred in late March and early April due principally to heavy snow and a late spring break-up. The entire area of central and eastern Alberta was short of feed. Roads were blocked and many stacks could not be reached. Hay was shipped from Manitoba and all surplus within the province was diverted to the shortage districts. Over 300 cars of fodder were moved in a six-weeks period. Any surplus fodder left from winter feeding will provide some assurance against the severity of a similar condition.

CROP IMPROVEMENT SERVICE

FORAGE CROP SEED DISTRIBUTION POLICY

This policy provided forage seed distribution facilities in sections of the province where such a service was not available. Readily available supplies of good seed are essential if these valuable crops are to be promoted for live stock feed, soil conservation and weed control purposes.

Various policies have been used in past years to encourage the use of forage crops. These have been effective and as a result a large market for seed has been built up in the province. More retail outlets have been established and the Department has therefore withdrawn the facilities of the seed distribution policy from large areas in the past two years. The irrigated areas and adjacent non-irrigated areas of southern Alberta are served by co-operatives and commercial concerns. The Alberta Seed Growers' Co-operative serves territories at Red Deer, Lacombe, Ponoka, Wetaskiwin, Thorsby, Westlock, Falher, Berwyn and part of the Spirit River district. The balance of the Peace River district is served by the Peace River Seed Growers' Association.

The Forage Crop Seed Distribution Policy in operation during 1948 established a reserve of grass and legume seed and provided readily available seed ordering and delivery facilities at 167 strategically located points. The seed was sold at cost, freight prepaid. Export prices were high and the demand was keen. This made it extremely important that seed be reserved for domestic requirements.

A summary of Seed Distribution for the years 1942 to 1948 (inclusive) is as follows:

	Pounds of Seed Distributed							Price
	1942	1943	1944	1945	1946	1947	1948	1948
Alfalfa	92,238	143,323	161,000	170,435	219,130	130,030	97,601	.41
Red Clover	7,450	12,095	8,925	28,645	72,782	47,650	28,667	.55
Alsike Clover	6,450	13,089	26,200	35,464	50,687	31,650	23,497	.47
Sweet Clover	26,185	75,759	85,000	116,890	134,962	169,898	150,889	.15
Alsike-Timothy Mixture	3,115	3,486	6,000	10,982	9,289	15,300	18,857	.20
Timothy	12,690	37,003	40,000	39,190	44,575	41,756	29,793	.11½
Crested Wheat Grass	41,225	53,640	44,436	44,035	47,621	24,800	8,647	.32
Creeping Red Fescue		1,404	2,000	1,753	5,735	4,441	12,454	.38
Brome	68,253	163,706	152,000	161,845	174,275	166,305	152,393	.16
Alfalfa-Sweet Clover Mixture				6,785	4,970	4,587	25,059	.25
Miscellaneous	340	550	220	5,807	891	263	1,311	
TOTAL	257,946	504,055	525,781	621,831	764,917	636,680	549,168	

While less seed was distributed under the policy in 1948 than in 1946 or 1947 the total distribution, including seed distributed by growers' organizations, was increased to well over one and a half million pounds. This increase is encouraging but the total distribution, while large, is only a small fraction of the quantity that would be used if a permanent type of farming were adopted by all farmers in the province.

Alfalfa, brome and sweet clover were in greatest demand and are grown in most sections of the province. Crested wheat is confined mainly to the drier open prairie sections where it is a valuable hay and pasture crop, and is used in range reclamation. A much larger distribution of crested wheat grass seed would have been made if it had been available. The demand for alsike and altaswede clover seed in the black and grey soil areas continued to be strong. The growing importance of these crops for seed production accounted for the demand. For the first time there was enough field inspected alsike seed to supply provincial needs. The demand for timothy appears to be decreasing and was confined mainly to the moist sections of Zone 4. Creeping Red Fescue is gaining importance both as a seed crop and for pasture. In conjunction with seed distribution the Field Crops Branch has stressed the importance of inoculating legumes, proper seeding and management practices and the use of grass-legume mixtures for forage purposes. To ensure the inoculation of legume seeds, tins of nitro-culture were placed in all sacks of alfalfa and clovers distributed. Special emphasis has been placed on quality and purity of seed distributed especially in seed producing areas.

Creeping Red Fescue Seed Crop.

ENCOURAGEMENT POLICY FOR THE PRODUCTION OF FORAGE CROP SEED

The purpose of this policy is to provide District Agriculturists with a means of promoting forage crop seed production in suitable areas and encouraging farmers to use the highest quality seed in establishing stands for seed production.

Under the terms of the policy the Department undertook to provide a maximum of 50 pounds of seed to a farmer at part cost price, on the recommendation of the District Agriculturist. Only one kind of seed could be obtained and the farmer agreed to supply the Department, on request, with detailed information relative to the crop produced.

Under the policy 450 pounds of registered Grimm and 1,000 pounds of registered Ladak alfalfa were distributed. In addition 580 pounds of registered Altaswede, 530 pounds of Field Inspected Alsike and 303 pounds of registered Creeping Red Fescue were distributed. Sixty-one farmers were approved under the policy.

PASTURE IMPROVEMENT POLICY

There is too little appreciation of the value of a suitable grass-legume pasture mixture and still less of the importance of proper management of pastures.

The purpose of the pasture policy, which operated this year for the first time, was to provide District Agriculturists with a means of demonstrating the value of improved pastures and good pasture management.

Seed of a suitable pasture mixture for not more than 10 acres was supplied to selected farmers at half-cost. Selection was made on the basis of their interest and suitability of their location to demonstrate suitable pastures and pasture management. Where fertilizers were necessary for satisfactory stands they were provided on the same basis.

One hundred and fifty-seven applicants were approved and were supplied with a total of 14,486 pounds of seed under the policy.

FIELD PEAS ENCOURAGEMENT POLICY

The acreage of field peas in Alberta reached a high point of about 25,000 acres in 1945 and has dropped each year since, reaching the low point of 14,500 acres in 1948. Production is confined mainly to irrigated districts and the black and grey soils. Peas have a place in the cropping programme where a rotation is followed that permits them to be grown on land that is not weedy. They are usually grown as a seed crop but could, to advantage, be used more extensively as a high protein live stock feed. In order to determine the place of peas on Alberta farms the Field Crops Branch shared the cost of supplying four-bushel lots of seed to each of 14 farmers who entered into an agreement to pay approximately half the cost of the seed, to adopt recommended seeding and harvesting practices and to report the results obtained. Thirteen of these, who took advantage of this policy, were supplied with the variety Chancellor and one with Early Blue.

FORAGE CROP SEED PRODUCTION

Production of nearly all the commonly grown forage crop seeds showed a substantial increase in 1948 over 1947. Alfalfa and Alsike each increased by two million pounds or roughly 50 per cent; Sweet Clover increased four million pounds which is about 80 per cent; Red Clover increased by about half a million pounds or about one-third and Creeping Red Fescue was up 800,000 pounds or about 130 per cent. Brome grass seed production was down about a half million pounds or twenty-five per cent. Timothy and Crested Wheat Grass continued at a very low level, although current high prices for the latter did stimulate production slightly.

The increases in alfalfa and sweet clover were largely the result of a very favourable season and a heavy set of seed. Alsike and Altaswede production was affected by these factors but to a great extent by the spectacular increase in the seed producing acreage. Creeping Red Fescue seed, being a crop that requires ample moisture in the spring of the production year, was markedly affected by the season. Moisture was adequate in the spring of 1948 and the producing acreage was large. This accounted for the greatly increased production.

The following figures give the estimated forage seed production in Alberta of the most important forage seed crops for the period 1943 to 1948 inclusive.

	1943	1944	1945	1946	1947	1948
Alfalfa	1,450,000	2,500,000	4,000,000	3,500,000	2,500,000	4,500,000
Sweet Clover	1,500,000	4,000,000	4,000,000	5,000,000	5,000,000	9,000,000
Red Clover (Altaswede)	450,000	475,000	1,300,000	850,000	1,500,000	2,000,000
Alsike	200,000	500,000	1,200,000	1,000,000	2,000,000	4,000,000
Timothy	1,000,000	1,200,000	1,000,000	750,000	200,000	200,000
Crested Wheat	300,000	250,000	200,000	100,000	75,000	60,000
Brome Grass	4,000,000	4,000,000	4,000,000	4,500,000	4,500,000	4,000,000
Creeping Red Fescue	190,000	300,000	850,000	250,000	600,000	1,400,000

Forage seed prices, which appeared to be starting a downward trend in 1947 rallied in 1948 in all but a few cases.

With the continued increase in forage seed production marketing facilities continue to expand. There was a large number of organizations in the field and they continued to expand their handling facilities. The Alberta Seed Growers' Co-operative, with its affiliated district Associations, enlarged its well equipped seed cleaning and warehousing establishment at Camrose. Four smaller plants and twenty-one warehouses of the Co-operative for assembling seed shipments were operated at other points in the province. Field Superintendents, at Red Deer, Thorsby, Westlock, Falher and Peace River were in charge of buying and selling forage crops and cereal seeds for the Co-operative. Other Co-operatives at Grande Prairie and Pincher Creek provided seed cleaning and marketing services to seed growers in the respective areas. These Co-operatives also made seed available to farmers.

DISTRIBUTION OF SEED GRAIN TO AREAS OF SHORTAGE

Crop losses from hail, frost and drought were not severe in 1947. As a result there were very few districts requiring carlot shipments of seed grain in the spring of 1948. In most districts where crop losses were suffered there was seed available within trucking distance. The total distribution by the Field Crops Branch was about 3,500 bushels of barley. Three thousand bushels was of the variety Newal and the balance Olli. The Alberta Seed Growers' Co-operative distributed about 16,000 bushels of Olli barley and about 13,000 bushels of Victory oats. A few carloads were distributed by grain companies but the total quantity was relatively small.

WANHAM PROJECT SEED DISTRIBUTION

In the spring of 1948 about 20 Veterans were given leases, by the Department of Lands and Mines, on half-section holdings north of Wanham, in the Peace River country. Approximately 250 acres had been broken on each parcel by Lassiters Ltd. during the previous summer. In order to ensure that settlers did not use weedy grain for seed a meeting of the settlers was called at which they agreed to use only seed supplied by the Field Crops Branch. Two hundred and fifty-eight bushels of Registered Redwing flax, 7,110 bushels of registered Ajax oats, 282 bushels of registered Victory oats and 2,664 bushels of commercial Olli barley cleaned to registered standards were

used by the settlers. An unfavourable season resulted and very little grain was threshed on the project. There was no rain until the last week in July and much of the seed did not germinate until after that date.

PRODUCTION AND SALE OF REGISTERED AND CERTIFIED SEED

The unusually large crop of registered and certified seed grain produced in 1947 was practically all marketed by June 1948. The main exception to this was Montcalm barley which ceased to move early in 1948, at which time the American market stopped purchasing, pending carlot malting trials. The 1948 crop established new records for total production but at the end of the year very little had been sold as seed either for Provincial distribution or export, and indications were that the export situation was not likely to improve.

In the following table a yield summary is given of cereal and flax crops inspected for registration and certification over a three-year period.

	ESTIMATED YIELD—(BUSHELS)		
Kind	1946	1947	1948
Wheat	444,259	1,111,669	2,349,000
Oats	1,173,039	1,719,424	2,250,000
Barley	232,524	392,389	788,000
Flax	26,273	58,551	175,000

Production of these crops in 1948 is obviously greatly out of line with normal requirements. As a result of little demand much of it has been and will be sold as commercial grain. This will, no doubt, result in reduced production in 1949 but it will probably take two or three years for a reasonable level of production to be reached. While the boom conditions with respect to seed have made it difficult to maintain standards and to develop good seed growers, they have resulted in many farmers using good seed who might not otherwise have done so.

In the following table a summary is given of acreages of grass and legume crops inspected for Registration and Certification over a three-year period.

	Registered (Acres)			Certified (Acres)		
	1946	1947	1948	1946	1947	1948
Alfalfa	4,739	9,029	10,888	427	678	555
Brome	184	56	186	11,160	11,452	10,861
Creeping Red Fescue	110	168	317	1,597	2,890	5,810
Crested Wheat	11	11	.....	.....	325	110
Red Clover (Altaswede)	40	125	263	.....	258	237
Sweet Clover	.....	.....	130	100	374	758

THE ALBERTA CROP IMPROVEMENT ASSOCIATION

This Association has concerned itself particularly with the problem of encouraging the wider use of registered and certified cereal grains for the purpose of maintaining or improving the quality of commercial grain. Through the co-operation of grain companies and the Alberta Seed Growers' Co-operative, arrangements were made whereby grain elevator agents were authorized to accept farmers' orders for registered and certified seed. An adequate supply of seed of most varieties was available, making a large distribution possible.

The Association is directed by a committee which represents the North-West Line Elevators' Association; the farmer-owned

elevator companies; the Plant Products Division, Dominion Department of Agriculture; the Alberta Seed Growers' Co-operative; the Canadian Seed Growers' Association (Alberta Branch); the University of Alberta and the Alberta Department of Agriculture.

Registered and certified seed grain marketed through the Alberta Crop Improvement Association in 1948 in comparison with previous years is as follows:

	1942	1943	1944	1945	1946	1947	1948
Wheat	5,961	3,000	9,232	20,014	23,728	35,179	45,279
Oats	34,659	10,500	16,011	11,670	26,560	35,235	43,462
Barley	4,349	2,500	6,579	2,450	15,492	23,972	19,616
Flax	868	.....	1,215	328	1,194	11,321	10,419
Rye	....	.....	.....	.....	208	346	105
	45,837	16,000	33,037	34,462	67,182	106,053	118,881

A great deal of credit is due to grain companies and elevator agents for the success of this policy of seed distribution. The growers themselves co-operated reasonably well in having seed cleaned, sacked and sealed as early as possible as well as by filling orders promptly. It should be noted too that farmers who marketed wheat as registered or certified seed did not receive the benefit of payments made by the Wheat Board on producers' certificates.

It is of interest to note the fluctuations in prices of registered seed grain in recent years. The following table summarizes the price per bushel of registered No. 1 seed grain over a four-year period.

	1945-46	1946-47	1947-48	1948-49
Wheat	$2.25	$2.35	$4.50	$2.95
Oats	1.70	1.60	2.50	1.70
Barley	1.80	1.80	3.00	2.50
Flax	4.70	7.00	8.00	6.00

These prices covered all costs of seed, including sacks, freight and prepayment to any railway point in Alberta.

The abnormally high price paid for the 1947 crop is accounted for by the fact that there was a strong export market which governed prices under the Alberta Crop Improvement Association. In the other years A.C.I.A. prices were based on the prices paid for commercial grain plus extra costs and a reasonable premium.

THE CANADIAN SEED GROWERS' ASSOCIATION (ALBERTA BRANCH)

Regional branches of the Canadian Seed Growers' Association have as their main function the dissemination of information, relative to seed growing, to all growers of registered seed in the area being served. They also endeavor to make farmers better-seed conscious and by so doing raise the general level of quality of crops produced. Such a programme increases the demand for registered seed. As this is a Crop Improvement programme and the Alberta Branch endeavors to serve the entire province, the Supervisor of Crop Improvement, a member of the staff of the Field Crops Branch, acts as Secretary.

In 1948 the programme of the Branch included field days at Airdrie, Lacombe, Westlock, McLennan, Fairview and Beaverlodge. In addition a meeting was held at Camrose in February. All meetings were well attended. The Peace River meetings

were held with the co-operation of the Dominion Experimental Station at Beaverlodge. The Lacombe meeting was held at the Dominion Experimental Station through the co-operation of the Station staff. It was the annual meeting of the Branch.

Four circular letters were prepared and mailed to growers during the winter and spring months and a mimeograph entitled "Hints for Growers of Registered and Certified Seed" was made available to growers upon request.

The two dollar membership fee put into effect in 1947 though voluntary was paid by 930 growers. Fees for the 1948-49 season were being collected for the Branch by the Central Office at Ottawa. Through the collection of fees the Branch was placed in a very favourable financial position.

Preliminary plans were made for the annual meeting of the Canadian Seed Growers' Association to be held at Edmonton in June, 1949.

The following table gives total membership of the Canadian Seed Growers' Association and the membership in Alberta for the years 1938 to 1947 inclusive:

Year	Alberta	Canada	Alberta in % of Canada
1938	438	2805	15.6
1939	344	3046	11.3
1940	349	3491	10.0
1941	315	3035	10.4
1942	274	2637	10.4
1943	244	2523	9.7
1944	340	2586	13.1
1945	522	2731	19.1
1946	756	3402	22.2
1947	1694	4670	**36.3**

Field Inspections indicated that memberships in connection with the 1948 crop would reach a much higher total than in any previous year.

THE ALBERTA VARIETAL ZONATION COMMITTEE

The purpose of this Committee is to co-ordinate the findings of the various experimental agencies in the province with respect to Field Crop varieties and to recommend the varieties best suited to the various soil climatic zones. The Committee is composed of representatives of the following: Departments of Plant Science and Soils, University of Alberta; Provincial Field Crops Branch and Schools of Agriculture; Dominion Experimental Farms and Dominion Science and Production Services.

The annual meeting of the Committee was held in December at which a number of changes were made in the list of recommended varieties.

Red Bobs wheat was dropped from the recommended list. The announcement of the Board of Grain Commissioners that after August 1st, 1951, this variety would not be eligible for grades better than 3 Northern had a direct bearing on this decision. Saunders wheat was recommended for the first time, but only in Zones 3 and 4.

The Winter Wheat variety Yogo was recommended for the first time. It replaced Kharkov in Zone 1 and shared Zone 2 with that variety. Kharkov remained as the only recommended variety in Zones 3 and 4.

The oat variety Legacy, which was formerly recommended in all but Zone 1, was dropped from the list.

The U.S. barley variety Compana, first licensed for sale in Canada in 1948, was recommended for Zone 1 and Newal was dropped from that zone. Sanalta which was formerly recommended for irrigated areas and Zone 3 was dropped. Olli was also removed from the recommended list for irrigation.

In flax the variety Bison was dropped. It had been recommended for Zones 1 and 2. A new U.S. variety Dakota was recommended for the first time but only in Zone 2.

This left the recommended cereal varieties as follows:

WINTER WHEAT—Yogo in Zones 1 and 2; Kharkov in Zones 2, 3 and 4.

Hard Red Spring Wheat

Zone 1—Marquis, Thatcher.
Zone 2—Marquis, Thatcher.
Sawfly areas—Rescue.
Zone 3—Saunders, Thatcher.
Zone 4—Saunders, Thatcher.

Flax

Zone 1—Royal.
Zone 2—Dakota, Redwing, Royal.
Zones 3 and 4—Redwing.

Malting Barley

Montcalm, O.A.C. 21 and Olli in Zones 2, 3 and 4.

Oats

Zone 1—Ajax, Victory.
Zone 2—Ajax, Eagle, Victory.
Zone 3—Ajax, Eagle, Larain, Victory.
Zone 4—Ajax, Larain, Victory.

Feed Barley

Zone 1—(Dry Land)—Compana, Titan.
Zone 2—(Dry Land)—Newal, Olli, Titan.
Irrigated Areas—Newal, Titan, Trebi.
Zone 3—Newal, Olli, Titan.
Zone 4—Newal, Olli.

RYE—Dakold (Fall) and Prolific (Spring) in All Zones

A sub-committee on rye appointed in 1946 to gather information on varieties being grown in the Province reported that although a variety known as Bessarabian or Russian created a lot of interest in 1945 and 1946 with great claims made for its yielding ability and hardiness, the results of tests conducted at Olds, Lacombe and Edmonton indicated that this variety was less winter hardy than Dakold and that where winter killing did not occur yield differences were negligible.

The recommendations of this committee were printed in bulletin form by the Field Crops Branch and widely distributed throughout the Province.

PRODUCTION OF SPECIALTY CROPS

Soft White Spring Wheat:

Soft white wheat, which is used for making pastry flour, was first grown in Alberta about 1930. A flour mill in Southern Alberta had a small acreage grown under contract in the irrigation area. There was no variety at that time sufficiently early maturing to be grown in Central or Northern Alberta.

More recently new varieties introduced from the United States and tested by the University of Alberta and milling companies have proven satisfactory in more northerly areas and have considerably out-yielded our best varieties of hard, red spring wheat. At the present time the variety Lemhi is considered to be the best of these. A relatively low protein content is required for pastry flour. Lemhi is very good in this respect when grown under irrigation or on grey soil.

It appears that there is a potential market for about 1½ million bushels and it would appear that 50,000 acres would produce enough to supply this market. Since there is no open market for the crop, farmers in adapted areas should only grow it under contract with one of the milling companies.

There were 33,200 acres seeded to soft white spring wheat in 1948. About 3,200 of this was on grey soil west of Edmonton and the balance under irrigation in the Duchess-Tilley-Brooks area. This is an increase of more than 8,000 acres over the 1947 figure.

MUSTARD SEED

Mustard seed has been grown successfully under dry land conditions in southern and eastern Alberta for several years. Since the market for it is limited, it is all grown under contract with commercial firms.

Two kinds are being grown, yellow and brown, with yellow accounting for about two-thirds of the acreage but yielding only about two-thirds as many pounds per acre as brown. Growers received about 9c per pound for yellow and 6c for brown. Total acreage in 1948 was between 30,000 and 35,000, which is about 15% below the 1947 figure. Yields of about 400 pounds per acre for yellow and 600 pounds for brown were well above the 1947 figure when about an average crop was produced. Excellent moisture conditions and absence of hail accounted for the high yields. Total production was about fifteen million pounds and the returns to farmers over one million dollars.

PROVINCIAL JUNIOR GRAIN SHOW

The annual Provincial Junior Grain Show was held in conjunction with the Calgary Board of Trade Seed Fair and Agricultural Short Course at the Victoria Park arena, Calgary, on January 29th, 30th and 31st.

The top three samples from each of 77 grain clubs in the province competed in Club competition. In the open classes competition was open to all Alberta farm young people between the ages of 12 and 22 (inclusive). There were 155 entries in the four open classes and the quality of the exhibits was high. A total of 385 samples of grain were on display in the Junior Show. They drew the attention of a large number of interested spectators.

INTERNATIONAL SEED SHOWS

In pre-war years Alberta exhibitors of seed established an enviable record of winnings at the International Hay and Grain Show, Chicago, as well as at other world shows. These winnings date back as far as 1876 when championships in wheat and barley were won by the French Mission at Fort Chipewyan. A summary of winners of first prizes and championships won up to 1942 appeared in the annual report of the Field Crops Commissioner for that year.

The International Hay and Grain Show was not held in the years 1942 to 1945 inclusive. In 1946 it resumed operations and the Royal Winter, Toronto, which had also closed during the war, re-opened with greater emphasis being placed on the seed section. In 1947 the Royal began offering world championships in cereals.

In 1946 a large number of Alberta exhibits did not reach Chicago as a result of delays enroute and in Chicago.

WINNERS OF FIRST PRIZES AND CHAMPIONSHIPS AT INTERNATIONAL SEED SHOWS——1946 to 1948

1946	Chicago	First Prize	Barley (6-rowed)	T. E. Brown	Cassils
	Toronto	Championship	Wheat	Wm. Miller	Edmonton
	Toronto	First Prize	Wheat (Registered or Certified)	Fred Paverly	Wembley
	Toronto	First Prize	Creeping Red Fescue	James Murray	Fogelvik Farms, Innisfail
	Toronto	First Prize	Wheat (Junior Section)	Marjorie Roppel	Rockyford
1947	Chicago	Championship	Wheat	S. J. Allsop	Red Deer
		First Prize	Alsike	T. Corlett	Clairmont
	Toronto	Championship	Early Oats (Region 1)	T. E. Brown	Cassils
		Championship	Winter Wheat	T. E. Brown	Cassils
		Championship	Barley	B. & C. Brown	Cassils
		First	Spring Wheat (Registered or Certified)	T. E. Brown	Cassils
		First	Spring Wheat (Junior Section)	B. Hendricks	Rockyford
1948	Chicago	Championship	Wheat	S. J. Allsop	Red Deer
		Championship	Oats	J. T. Eliuk	Hairy Hill
		Reserve	Oats	J. Boulton	Abee
		First	Sweet Clover	L. C. Anderson	Camrose
1948	Toronto	Championship	Wheat	S. J. Allsop	Red Deer
		First	Hard Red Winter Wheat	S. J. Allsop	Red Deer
		First	Soft White Spring Wheat	T. E. Brown	Cassils
		First	Wheat (Junior Section)	L. Mason	Warner
		First	Hard Red Spring Wheat (Domestic Division)	Wm. Miller	Edmonton
		First	Hard Red Winter Wheat (Domestic Division)	T. E. Brown	Cassils
		Reserve	Barley (Western Region)	T. E. Brown	Cassils
		First	Barley (Trebi Type)	T. E. Brown	Cassils
		Championship	Oats	J. Boulton	Abee
		Reserve	Oats	V. Watson	Airdrie
		Reserve	Oats (International Division)	E. Mohler	Camrose
		First	Oats (White Early)	N. Frederick	Busby
		First	Oats (Junior Section)	N. Boulton	Abee
		Championship	Rye	R. Wennerstrom	Camrose
		Reserve	Rye	T. E. Brown	Cassils
		First	Flax	C. K. Rosdal	Rolling Hills
		Reserve	Alfalfa	J. Tell	Brooks
		First	Alsike	T. Corlett	Clairmont
		Reserve	Clover	T. Corlett	Clairmont
		First	Sweet Clover	L. C. Anderson	Camrose
		First	Brome Grass	J. Pringle	Coronation
		First	Creeping Red Fescue	V. Watson	Airdrie
		Reserve	Grasses	V. Watson	Airdrie

The showing of Alberta exhibitors at these shows in 1948, particularly at Toronto, was indeed creditable. At Chicago, Alberta exhibitors won two championships, one reserve, three firsts, three seconds, three thirds and eleven other prizes. The total being twenty-three awards. At Toronto, 118 awards were won by Albertans. These consisted of four championships, seven reserves, seventeen firsts, fourteen seconds, eleven thirds and sixty-five other prizes. Winnings in classes for boys and girls merit special mention. In wheat Alberta Juniors won prizes one to twenty and the twenty-second prize; in oats the first and second prizes, and in barley five prizes all below fifth.

LADAK ALFALFA

At the meeting of the Provincial Seed Board held in December, 1946, it was agreed that there was a need in the province for an alfalfa variety having more resistance to bacterial wilt than Grimm. It was further agreed that the most satisfactory variety available was Ladak and that steps should be taken to have seed of it produced in sections of the Peace River country where other varieties were not being grown.

Six thousand pounds of registered and 150 pounds of registered (approved) Ladak were purchased by the Field Crops Branch. Only the approved stocks were eligible for the production of registered seed. In 1947 four thousand pounds were distributed to growers, in the Peace River country, selected for ability and isolation. Of this, 150 pounds was approved stock. In 1948 seven hundred and fifty pounds was distributed in the Peace River country and 250 pounds in the south Bantry Project near Tilley, Alberta. Part of the 1948 distribution went into the new veterans' project, north of Wanham, in the Peace River country.

Production of Ladak in 1948 was approximately thirty-seven thousand pounds. Of this about 15,000 pounds was commercial seed, 20,000 pounds was eligible for certification, and the balance for registration.

It appeared that there will be a market at a premium for all seed, not required for an expansion of seed production, in the irrigated areas of southern Alberta where wilt is a problem.

SEED CONTROL AREAS ACT

Recognizing the need for enabling legislation to restrict the growing of open-pollinated seed crops, particularly legumes, to certain kinds or varieties in certain areas, the provincial legislature passed "The Seed-Control Areas Act" at its 1948 session. This Act makes it possible for not less than 60% of the occupiers of land in a proposed seed-control area to petition the Lieutenant-Governor-in-Council to have such an area established and to have the kinds and varieties of crops to be grown or prohibited in the area specified.

No seed-control areas were established during the year. Settlers on the veterans' project, north of Wanham, did however petition to have one established. It will be considered in 1949. That area being entirely new is well adapted to such a plan. It is proposed that Ladak alfalfa, altaswede, red clover; alsike clover; brome and creeping red fescue shall be the kinds and varieties of forage crops grown in the area.

CO-OPERATIVE STUDIES

HARVESTING ALTASWEDE CLOVER

This study was undertaken in co-operation with District Agriculturists at Thorsby and Westlock and farmers in those areas. Its purpose was to determine whether or not losses in standing fields, as a result of heads being broken off by high winds in October, were heavy enough to make straight combining inadvisable.

Samples were taken from the ground in 15 fields that were not yet harvested. Fairly strong winds were experienced a few days before the samples were taken. Losses were computed on an acre basis and found to range from 0.8 to 44.4 pounds. The average loss was 13.2 pounds per acre. Such an average loss cannot be considered serious but studies and observations in future years will be necessary before definite conclusions can be reached.

CHEMICAL DEFOLIATION OF CLOVER CROPS

The most difficult problem faced by legume seed growers is that of harvesting. Straight combining cannot be carried out until the material has dried standing. This usually requires a killing frost. In the meantime the crop is exposed to weather hazards and, particularly in the case of alsike clover, shattering of seed heads is almost sure to take place. Chemical defoliation of crops is being done successfully and for various reasons in eastern Canada and the United States.

In the spring of 1948 an eastern chemical firm provided a grant and chemicals to the Department of Plant Science, University of Alberta, for the purpose of experimenting on the defoliation of legume seed crops. Small plot and greenhouse experiments were conducted during the summer. In the fall the Field Crops Branch co-operated with the University by providing spray equipment and an operator as well as by locating farmer co-operators so that field experiments might be conducted.

The experiments were of a preliminary and exploratory nature and no definite conclusions can be drawn. The dusts showed less promise than the sprays. In general the results were sufficiently promising to justify further investigations.

HONEY BEES AS POLLINATORS OF CLOVER CROPS

Legume seed growers in Alberta now generally recognize the value of bees as a pollinating agent in their fields. Tests conducted elsewhere have shown honey bees to be effective largely because their numbers can be controlled. For some time it has been felt that reliable information was needed with respect to their value under Alberta conditions.

During the year the Apiary Branch and the Field Crops Branch co-operated with the University of Alberta in a preliminary study in alsike and altaswede fields on the farm of J. H. McLaughlin at Spruce Grove. Four fly screen cages that would keep out all kinds of bees were placed in a field of alsike and four in a field of altaswede. Just before the crops were windrowed samples were taken from inside the cages and from outside but quite close to the cages. Yields were computed on an acreage basis.

Alsike inside the cages (from which the bees were excluded) yielded, on the average, only 24 pounds of seed to the acre. From the alsike outside the cages the yield was 463 pounds per acre. Yields for altaswede were 23 pounds per acre inside and 375 pounds per acre outside the cages. It is interesting to note that wild bees, according to counts made by the Apiary Branch, were particularly numerous this year. It was found that there were 40% as many wild bees as honey bees in the fields.

This study opened up many questions to which answers cannot be given from present knowledge. Further studies will be required.

SOIL CONSERVATION AND WEED CONTROL

The spring of 1948 was late. Snow in most areas did not leave until the end of April or early May. Edmonton meteorological station reports April, 1948, as being the coldest, wettest and dullest April on record. Mean temperature for the month was 26.8 compared with a normal of 40.3. Precipitation was 2.85 inches compared with .96 inches. The wet spring prevented farmers from doing the normal spring cultural weed control practices; in fact, stinkweed on many farms went to seed before farm implements could be taken on the land. Weeds in 1948 got an early start and maintained stiff competition with the crops throughout the growing season.

FIELD DEMONSTRATIONS

Demonstration fields on weed control have encouraged many farmers to change from old weed control measures to newer ones. The Department assisted the Service Boards to establish 114 weed control demonstration fields in 1948. Most field trials included both cultural and chemical control practices. Records were kept of all observations made throughout the season. Some 500 square-yard samples were harvested and threshed from 22 of the fields. The information obtained is presented to farmers of the district at winter meetings. District Agriculturists and Field Supervisors, assisted wherever possible by staff from the Field Crops Branch, discussed cultural weed control measures at 97 field days, with a total attendance of 2,498, held at the sites of the demonstration fields.

Olli barley seeded late and fertilized again demonstrated its value as a control measure against wild oats and tartarian buckwheat. It did not prove too satisfactory as a competitive crop against thistles, due largely to the late spring. Fall rye gave favorable results as a competitive crop. Mixtures of the grasses and legumes showed good results as competitive crops against weeds.

The Department supplied 3,400 pounds of fertilizer, 213 bushels of grain and 2,000 pounds of grass and legume seeds to make the field demonstrations possible.

CHEMICAL WEED CONTROL

Farmers made much more use of 2,4-D for weed control in 1948 than in 1947. Custom sprayers did most of the spraying in 1947, but in 1948 spraying of weeds became a home farm practice. About 750,000 acres were treated with 2,4-D chemical in 1948. Farmers now own 2,500 2,4-D machines (sprayers and dusters), 90% of which were bought in 1948. A large number of inquiries came to this office, District Agriculturists' offices and to Field Supervisors' offices regarding the proper mixtures of 2,4-D, amounts to apply, and how to operate the machine itself. The District Agriculturists and Field Supervisors organized 105 spraying field day demonstrations, forty of which were attended by Field Crops personnel. These 2,4-D field days were popular as indicated by a total attendance of 4,136 and did much to effect good weed kills by insuring proper rates of application.

Members of the Field Crops Branch established and super-

vised twenty-five 2,4-D weed control field trials on various weeds, one of Sinox W on tartarian buckwheat, and one each of IPC (sopropyl N phenyl. carbonate) and TCA (trichlor acetic acid) on couch grass. The 2,4-D was effective in killing susceptible annuals such as stinkweed and wild mustard when properly applied in the growing crop but gave no control when applied at rates up to 2 pounds acid equivalent in pre-emergent trials. It showed no control whatever on tartarian buckwheat. Sinox W in 35 gallons of water gave reasonable control on tartarian buckwheat. The top growth of perennial weeds such as the thistles and hoary cress was controlled with 2,4-D and seed setting stopped. It affected and stunted leafy spurge but did not prevent seed from setting in all cases. Our trials on toad flax showed no results.

Two trials comparing 2,4-D dust with sprays indicated similar results could be obtained by the two methods. More field work comparing 2,4-D dust with sprays must be done in 1949.

The IPC and TCA burnt down the top growth of couch grass and, although no definite statement regarding complete kills can be made for either, it was quite evident from observation that TCA gave the best results.

While results with 2,4-D throughout the province varied, from complete weed kills to only slight effect, the over-all picture generally indicates favorable results. The poor results were believed to be due largely to the dry cycle which prevailed during and after the time when the 2,4-D was applied. Weeds were almost dormant during the dry weather and the 2,4-D acid was not absorbed or circulated through the sap stream. Some of the poor results were attributable to improper mixtures or rates of application.

The policy of distributing sodium chlorate to farmers at cost was continued. The poundage used increased from 100,000 pounds in 1947 to 137,607 pounds in 1948. Most of this material was used on small patches of deep-rooted perennials or on land too rough for cultivation.

ROADSIDE SEEDING

The Department stressed the seeding of newly-graded roadsides to grass mixtures to control weeds. The Field Crops Branch supplied appropriate forage seed mixtures to seed 20 miles of road per municipality. About 19,000 pounds of grass seeds were supplied to 25 municipalities under this policy. Some Service Boards bought more seed in order that all their newly-graded roads could be seeded. Equipment from the Field Crops Branch seeded 691 miles of road for municipalities and 25 miles of government highway for Public Works.

CROWN LANDS

Three thousand pounds of forage seeds were used to seed down and control weeds on Crown lands. This seed was sown under the supervision of either the local District Agriculturist, Field Supervisor or Weed Inspector. Some of the lake shores seeded in years previous to 1948 produced excellent forage and effected weed control.

AGRICULTURAL SERVICE BOARDS

Two new Agricultural Service Boards were organized in 1948, bringing the total in the province to 30. The new Boards were formed in the municipality of Cochrane and in Local Improvement District No. 130, which is the first L.I.D. to organize a Service Board. Farmers have recognized the good work being done by these Boards. Weed infested farms taken over by the Board three or four years ago are being returned in a rehabilitated condition to their owners. Many Boards are not only cleaning up the weeds on farms under supervision and reclamation but are also making the land return greater revenue to the owner.

Six Field Supervisors resigned to take other employment in 1948. All Municipal Councils, whose Field Supervisors resigned, are attempting to or have filled the vacancies. The general trend is to offer more money for the Field Supervisor's position in order to attract qualified men.

FIELD SERVICES

The Field Crops Branch employed 25 District Weed Inspectors and five Weed Supervisors. These men, directly responsible to the Field Crops Branch, were employed in weed control work for the summer in the Local Improvement Districts. These men are handicapped in that all are part-time employees and many are new to the work and many are not familiar with the district.

Thirty full-time Field Supervisors were employed by the Municipal Districts with Service Boards as well as 31 part-time Weed Inspectors. Municipalities without Service Boards employed 10 Weed Inspectors. The total field force of weed workers in Alberta in 1948 amounted to 101 men.

A two-day conference attended by all Service Board members was held at Edmonton in June. This conference was held primarily to acquaint new Service Board members with the weed control and soil conservation work going on in other municipalities, to outline future programmes, and to have an exchange of ideas on methods of weed control, etc.

Staff from the Field Crops Branch held short course meetings at Edmonton, Lethbridge and Grande Prairie with the L.I.D. Inspectors. Practical weed control measures, ways to deal with farm weed problems, and other subjects designed to assist the Inspectors were discussed.

Fall regional meetings of District Agriculturists and Field Supervisors were held at Edmonton, Calgary and Vegreville. Winter programmes on soil conservation and weeds were planned at these meetings.

SEED CLEANING AND SEED SERVICES

Permits were issued to properly constructed and efficiently operated seed cleaning plants. Some plants, particularly in country elevators recognized as being inefficient because of construction and equipment, have been granted temporary permits because no other facilities are available in that area. One hundred and twelve such permits were issued to elevator companies at various points and 13 to private individuals in 1948. District

Agriculturists and Supervisors made 189 visits checking on seed cleaning plants to which permits were issued.

The lack of adequate cereal seed cleaning machinery makes it difficult to raise the standard of seed sown and so reduce weed infestations from that source. Seed drill sample surveys conducted by Service Boards bears this out. One hundred samples collected at random from seed drills in the Leduc municipality were tested for germination and graded as seed according to the Canada Seeds Act. The following results were obtained:

24.4% graded No. 1 seed
8.9% graded No. 2 seed
6.7% graded No. 3 seed
60.0% was rejected seed, largely because of the heavy wild oat content.

Another seed drill survey in the Morinville municipality showed that 40% made one of the three seed grades and 60% was rejected seed.

The Department of Agriculture, in recognizing the need for adequate seed cleaning plants, inaugurated a policy in 1948 to assist municipalities to establish good cleaning facilities. One such plant was erected at Camrose in 1948 and two other municipalities are ready to start building early in 1949.

SOIL CONSERVATION

There was much less soil drifting in the Province in 1948 than in 1947. An abundance of moisture in the fall of 1947 and the first part of 1948 prevented soil drifting in southern Alberta. Black summerfallow fields in central and northern Alberta drifted during the winter months because of lack of snow prior to February 20th. Soil drifting throughout the summer and fall was much lighter than had been experienced for several years.

Water erosion was unusually severe and widespread in 1948. The summerfallowed land of central and northern Alberta when well cultivated is in a very vulnerable condition with respect to water erosion. This condition was aggravated in 1948 by the extra heavy run-off. About 90% of the 1947-48 winter snow fell after February 10th, 1948, and stayed until the end of April. The Edmonton meteorological station reports 7.84 inches of precipitation from January 1st to May 15th, compared to a normal of 4.27 inches. Most of the precipitation fell as snow, which all melted in a very short time. The heavy run-off caused a tremendous amount of both gully and sheet erosion.

The Field Crops Branch conducted a gully filling demonstration for Service Board personnel at the time of their annual conference. This gully which varied in width from 3 to 20 feet and was up to 4 feet in depth was filled and levelled, leaving a wide water course which was seeded to oats and a mixture of grasses and legumes. While the results of this fill cannot be definitely known until the spring of 1949, indications of it remaining in place are very favorable.

Gullies filled and seeded to grass and legume crops in Morinville M.D. in 1946 and in Lacombe and Eagle M.D.s in 1947 were observed throughout 1948. None of these washed out in 1948 in spite of the fact that run-off was heavier than in preceding years and also the fact that two of the gullies had been seeded

Water eroded gulley 20 ft. wide to 4 ft. deep on a farm 6 miles south and 4 miles east of Edmonton. This gulley was filled as a demonstration, being part of the programme for the annual Service Board Conference.—Picture taken June 14th, 1948.

Department of Agriculture officials, University of Alberta Professors, Field Supervisors and Service Board members watch the bulldozer and road maintainer complete the gulley filling demonstration at the time of the annual Service Board Conference.
—Picture taken June 14th, 1948.

down for one growing season only. Twenty gully control demonstrations were held by District Agriculturists.

The Field Crops Branch has advocated the prevention of gullies by seeding down to grass and legume mixtures, before erosion takes place.

Farmer interest in soil conservation increased in 1948 as indicated by the fact that 16,054 people attended 426 meetings, at which District Agriculturists discussed soil conservation. Agricultural Service Boards and District Agriculturists, where no Board exists, organized a total of 123 soil conservation demonstrations of various kinds. It is estimated that 2,486 farmers saw these demonstrations at field days or individually.

The importance of having a good trash cover to conserve moisture and to prevent erosion on summerfallowed or fall worked land was stressed by the Field Crops Branch throughout the year. The number of trash covered fields in the fall definitely indicated that many farmers were adopting the practice, rather than burning off or plowing down the stubble.

The Department of Agriculture has encouraged the use of forage crops to restore soil fertility and to build up soil fibre. The value of forage crops for these purposes was demonstrated in some of the older established weed control demonstration fields.

"Save the Soil" campaigns were conducted in the Eckville, Wainwright, Vermilion, Grande Prairie and Edmonton districts.

Colored pictures were taken wherever possible of sheet and gully erosion, gully filling demonstrations, and soil drifting. These slides are on file for future reference and for use as visual aids in the winter extension programme.

CROP PROTECTION SERVICE

Crop losses from plant diseases and insect pests were slightly greater in 1948 than in the previous year. The loss due to disease was less but a heavier loss from insects accounted for the higher total.

Precipitation in southern Alberta in 1948 from the period April 1st to July 31st was 12.98 inches—3.98 inches above normal. From August 1st to November 30th, however, only 3/10 inch of rain was recorded, producing one of the driest periods on record. The ample spring precipitation provided growth for insect feeding without much apparent damage to grain or other crops, but by fall the situation had changed considerably in many areas. Unusually calm and dry weather in the southern part of the province was conducive to grasshopper egg laying and the movement of some major insect pests.

GRASSHOPPERS

The grasshopper egg survey in 1947 over the southern and south-central part of the province indicated a moderate outbreak for 1948. Supply of baiting material was therefore made available in the Claresholm-Macleod-Carmangay area, the Retlaw-Enchant area and the Stirling-Legend-Taber area, where moderate outbreaks were expected. A number of consecutive hot summer days, providing ideal conditions for grasshopper hatching, made the infestation somewhat more intense than was anticipated. The main focal points of the outbreak were centred

around Burdett and Bow Island on the Lethbridge-Medicine Hat line. A somewhat less severe outbreak occurred in the Turin-Enchant district lying between the Bow and the Old Man Rivers. A significant number of grasshoppers made their appearance in the northern part of the Special Areas, centering around Bodo, where a demand for bait arose. The extent of increase in grasshopper infestation in 1948 can be gauged from the fact that 47,600 bushels more of bait was spread than in 1947.

There were no outbreaks in northern Alberta. The Eaglesham area which had extremely serious local infestations in 1947 was to a considerable extent covered with flood water in the summer of 1948, thereby preventing crop losses. Fort Vermilion farmers did some baiting but the outbreak was not serious.

The table below compares the extent of infestation and other aspects in the grasshopper campaigns for the last three years:

	1946	1947	1948
Acres of land in the area	8,000,000	2,500,000	8,750,000
Acres of crop land menaced	60,000	32,000	195,000
Number of stations operated	6	11	17
Bushels of poisoned bait spread	16,000	9,100	56,700
Number of farms receiving bait	242	107	851
Estimated acres of crop destroyed	1,200	1,000	2,000
Estimated acres of crop saved	8,000	3,500	20,000
Estimated pounds of Chlordan used			800
Acreage sprayed by Chlordan			1,100

It will be noted that Chlordan, a chlorinated hydrocarbon, was used in Alberta for the first time in 1948 in a grasshopper control campaign. The results obtained were satisfactory. The greater effectiveness of chlorinated hydrocarbons over the standard chemicals (sodium fluosilicate and arsenite) may be explained by the following factors:

1. Non-toxicity to animals and wild life, etc.
2. The three-way action of Chlordan—contact, stomach and a fume poison.
3. The speed with which grasshoppers stop feeding—minimum crop loss.
4. Residual effect—longer crop protection.

Furthermore, chlorinated hydrocarbons can be readily applied on the field with modern weed equipment which is fast becoming standard farm equipment. The trend is towards the use of this method of control wherever possible.

In municipalities where bait could not be supplied immediately Chlordan was used and the Department shared the costs equally with the district.

A number of trials were laid out in the Lethbridge area to test the effectiveness of different methods of Chlordan application and to demonstrate its use. Six demonstrations were held with about fifty farmers attending. These were invaluable in providing first-hand information and requests received indicate that there will be a strong demand for further such demonstrations in 1949.

WHEAT STEM SAWFLY

The Wheat Stem Sawfly area in Alberta covered approximately 7,400,000 acres involving Crop Districts 1 to 7 inclusive. The damage caused by this insect was considerably less than in 1947. In the area running south-east of Lethbridge to Warner and east to Lucky Strike, where damage was reported as severe

in 1947, the infestation was somewhat reduced. Greater damage occurred around Vulcan, Champion, Turin, Enchant and in the Milk River-Warner areas.

The infestation did not build up appreciably in the northern sections of the surveyed area where a parasite of Wheat Stem Sawfly was instrumental in reducing the outbreak to a point where it was not of economic significance.

Publicity through the radio, press and public meetings was continued to encourage the use of proper crops and cropping practices for the control of this insect. Stocks of Rescue wheat (sawfly-resistant) have now been increased to a point where it will be generally available in the affected areas. The decrease in crop losses this year in Crop Districts 1 and 4 can be largely attributed to a wider and more general use of this variety.

The table below shows a comparison of the estimated crop losses due to the Wheat Stem Sawfly, in the last three years.

	Loss in Bushels		
Crop District	1946	1947	1948
1	1,050,000	1,289,000	1,021,000
2	144,500	143,880	39,700
3	180,000	197,500	205,500
4	1,680,000	1,586,250	1,018,500
5	10,000	56,400	113,200
6	100,000	150,000	197,700
7	5,000	Negligible	Negligible

In areas such as Provost, Consort, Huxley, Three Hills, Acme and Rockyford, which are not included in the sawfly forecast map, Wheat Stem Sawfly populations have been building up and have reached a point where severe outbreaks may be expected if precautions are not observed. It is planned to carry on intensified campaigns in these areas in order that preventive measures may be applied.

CUTWORMS

The pale western cutworm first appeared in injurious numbers in Alberta in 1911. Ever since that year outbreaks causing considerable losses have been frequent. Damage done to wheat, oats, barley and commercial mustard in 1948 was less than in 1947, although the forecast indicated a more widespread outbreak than actually occurred. Due to a wet spring in the infested areas, feeding was limited and where some crop damage appeared, ample moisture reserves were conducive to quick crop recovery. Only very slight crop losses occurred in areas from Lethbridge south to the Montana border and north-east towards Enchant. The area along the Alberta-Saskatchewan boundary from Medicine Hat to Compeer was also affected but crop loss was slight.

The south-western portion of the province from a line from Calgary to Coutts had sufficient rainfall to make a 1949 outbreak improbable. In eastern Alberta with near drought conditions prevailing after mid-summer an infestation may occur in 1949.

Damage by the red-backed cutworm was even less than in 1947. Localized areas in southern Alberta were affected by this species in truck crops and vegetable gardens in the irrigated area.

The army cutworm did some damage to flax and mustard crops along the Montana border.

WIREWORMS

Wireworm damage was reported in the Bow Island, Burdett, Vulcan and Milo districts resulting in quite severe thinning of crops in some fields. Excellent growing conditions in the south offset much of the early damage. Requests for control information from such points as Strathmore, Calgary, Lacombe and Wetaskiwin would indicate that they caused some concern there. Potato crops were moderately affected in the Calgary and Edmonton areas, although a few growers reported heavy damage. A 50% damage to tubers occurred in the St. Paul district on a field of potatoes planted into a previous year's grass sod. Cultural methods for wireworm control were outlined and distributed to many growers.

With agricultural chemicals coming rapidly to the forefront, many gardeners are seeking information about the possibility of using chemicals for the control of this pest. Cultural methods appear to be the only practical means of affecting control, although the use of chlorinated hydrocarbons in the dust or liquid form, shows promise. Benzene hexachloride was tried on a small scale and found effective, although Chlordan will most likely replace it especially in root crops. Further studies will be required before any recommendations can be made.

ENGLISH GRAIN APHIS

This species appeared for the first time in Alberta in such numbers as to be of economic concern. The area affected was the Claresholm-Granum-Parkland district extending to High River and covering approximately 100,000 acres of cover crop. Cover crops are seeded on summerfallowed land basically to prevent wind erosion of soil but they also serve a very useful secondary function in pasturing 35,000-40,000 head of livestock for 2 or 3 months at $7.00 to $10.00 per acre. The English Grain Aphis completely destroyed 80% of these cover crops and affected in varying degrees the remaining 20%. Only 1,000-2,000 head of livestock were fed in the area this year. It can be conservatively estimated that the district lost $1,000,000 as a result of this pest infestation.

Control attempts were made by applying various chemicals on infested fields with a low volume nozzle sprayer. A compound containing pyrethrum killed many aphides which were contacted directly, but this method did not prove practical in eliminating those which were hidden in the folds of grain. Aphides reproduce so rapidly that the few remaining ones soon rebuild the population.

Due to extremely wet conditions in this area cover crops were seeded about two weeks later than normal (August 1st-7th). Reseeding was not advocated as the crop would not have had a chance to develop sufficiently to prevent wind erosion. As an alternative, listing with shovels four feet apart, going one foot in depth, was recommended, or if shovel machinery was not available, the use of one-ways was advised by removing enough blades to make furrows four feet apart.

OTHER CROP PESTS

Colorado Potato Beetle infestations were about normal and about the same as in 1947. The use of DDT and other proven

insecticides was stressed. Complete elimination of the pest was affected by many growers where insecticides were properly applied. Re-treatment of some fields was necessary in the Calgary and Edmonton districts.

Numerous requests were received at the office as to the type of equipment best suited for potato beetle control. This information was made available and distributed. Two types of dusters were actually tried and both found satisfactory for the work.

Beet Webworms appeared only in a few localized areas to the extent that control was required. Although a very heavy moth flight occurred in the late spring apparently very few eggs were laid.

Red Turnip Beetle was very prevalent this season. Numerous requests for identification and control were received from many points north and east of Edmonton. Its prevalence was also reported from Grassy Lake, Medicine Hat, Lethbridge and Drumheller areas.

Garden Slugs were more abundant this year than for some years past. They were prevalent throughout the western and central section of the province—Lethbridge, Picture Butte, Okotoks, Calgary and Edmonton. Severe infestations of this pest were found in root cellars in the Edson area. The use of metaldehyde on small gardens and a copper lime dust in root cellars were effective control measures.

Grain Aphis was very abundant this year in practically every part of the province. Some oat fields were so heavily infested that this interfered with harvesting operations. Grain damage by this pest was practically negligible; they are more of a nuisance than a damaging pest.

Western Wheat Aphis, whose appearance in the Cowley district caused some concern in 1944, were not in evidence this year.

Pea crops usually have to be treated to avoid damage from aphis. In 1946 and 1947, however, their numbers had been so reduced that commercial treatment was unnecessary. In 1948 the insect was again more abundant than in 1947 and caused some concern to the growers of canning peas. Infestations will have to be watched in 1949.

Common Red Spider was prevalent on hollyhocks and many other plants. It appeared most severe where DDT had been used. Raspberry plots were seriously affected by this spider in the Edmonton area. A product containing hexaethyltetraphosphate was tried and found to be effective. Complete control was, however, difficult to obtain.

CROP DISEASES

LEGUMES

Crown rot of alfalfa was more destructive in the north-central parts of the province than in the southern portions, but the conditions were reversed with respect to bacterial wilt. In the Lethbridge district bacterial wilt increased noticeably in stands only two and three years old. The varieties Ranger

and Ladak showed more resistance than Grimm. Since Ladak is more winter hardy than Ranger, and since seed is available, it is recommended for areas where wilt is a problem.

CEREALS AND FLAX

Leaf and stem rusts of wheat were more prevalent in southern Alberta than in 1947 and caused appreciable reduction of yield in late maturing stands.

Common root-rot and Take-all did considerable damage to winter wheat in areas north of Calgary.

Flax rust was found on practically all fields in the Lethbridge district as well as in a few fields in the northern portions but losses did not reach serious proportions.

In a survey covering the area enclosed by Athabasca, St. Paul, Vermilion, Brooks, Lethbridge and Sundre ergot was found on most of the grasses. The following table shows the prevalence of ergot in cereal crops:

Crop	Fields Inspected	Fields Infected
Rye	23	17
Barley	95	10
Wheat	281	6
Oats	112	1

Only traces of infection were found in wheat and oats.

FRUIT TREES

Fire blight affecting apple trees continued to be severe in the Edmonton and Lethbridge districts.

BACTERIAL RINGROT

A very thorough survey and inspection of potato fields was carried out in commercial production areas. A total of 1,394 farms or 8,330 acres were inspected in the Edmonton, Drumheller, Calgary, Brooks and Lethbridge districts. The table below shows the ringrot situation since 1940 and the progress made towards its control:

RESULTS OF ANNUAL RINGROT SURVEY—1940-1948 Inclusive

	1940	1941	1942	1943	1944	1945	1946	1947	1948
No. farms inspected	261	430	406	965	1010	1198	1637	1127	1394
No. farms diseased	73	102	151	235	241	137	103	76	93
Change in No. diseased farms from previous years	+33	+29	+49	+84	+6	—104	—34	—27	+17
Percentage of inspected farms found diseased	28.0	24.7	37.3	24.1	24.8	11.4	6.3	6.7	6.7

Although there were 17 more farms with ringrot than last year, it should be noted that 267 more farms were inspected. The over-all picture with regard to the percentage of inspected farms found diseased remained the same as last year.

The following table shows the farms and acreage of potatoes inspected in various districts and the acreage containing ringrot:

RESULTS OF 1948 RINGROT SURVEY BY COMMERCIAL AREAS

	No. Farms Inspected	No. Farms Diseased	Acreage Inspected	Acreage Diseased	% Diseased of Total Acreage
Lethbridge	590	66	3809	334	8.7
Calgary	195	13	455	18	3.9
Brooks	264	4	2475	65	3.0
Edmonton	345	10	1600	112	7.0
Totals	1394	93	8339	529	

In the Edmonton and Lethbridge districts the greater number of farms found diseased were attributed to:

(1) A greater number of potato fields planted.
(2) The planting of some undesirable culls because of high seed potato prices.
(3) The completion of a thorough survey made possible by very fine fall weather and delayed fall frosts.

Considering the foregoing tables it is evident that in spite of increased fields and new growers, the ground gained previously has been held. Much stricter enforcement of regulations coupled with extensive extension work is necessary. Fieldmen and inspectors were warned to watch the movement of infested stocks. Good co-operation from the farmers was reported. A recent survey indicated that over 4/5 of the infected crop has already moved into satisfactory channels where they will not be used for seed.

CATTLE GRUBS (WARBLE FLIES)

In 1944 compulsory control measures for warble flies were instituted by an Order-in-Council affecting the Eastern Irrigation District and the Municipal District of Pincher Creek, where a plebiscite was taken. This brought about a tremendous increase in the percentage of the cattle treated. During the year, inquiries were received from the Municipal Districts of Bow Valley (Strathmore) and Conrich (Calgary) with respect to the possibilities of establishing warble free areas in their respective municipalities. This indicates a growing interest in the project.

Posters and handbills were distributed and public meetings were held to promote the practice of treating cattle. As in previous years stress was placed on co-operative community programmes. In two municipal districts, Turner Valley and Wainwright, the control campaign was conducted by their respective Agricultural Service Boards. Turner Valley alone treated over 35,000 head of cattle.

Some 800,000 head of cattle were treated in the province. This is approximately one-half of Alberta's total cattle population. In areas where cattle were not treated extensive "gadding" was observed.

SHEEP KEDS

The dipping of sheep in vats for ked control has been a common practice. This year seven flocks—8,000 sheep—were treated in the Lethbridge district with DDT and Chlordan by the spray method. A number of flocks were also sprayed in the Wainwright area. The method appears to have many advantages over the dipping method and met with favor generally.

RODENTS

The Columbian ground squirrel appeared in sufficient numbers in the southern foothills of Alberta to cause some concern to the farmers. Damage to hay, grain and garden crops was reported.

Numerous requests for information on methods of control of pocket gophers were received from practically every part of the black soil zone. Damage to alfalfa and other hay fields was so

extensive that many excellent stands were ruined. All the latest information was obtained and made available to the farmers concerned.

A preliminary study was started in the Wostok district in an attempt to find better and more practical means of controlling pocket gophers. This will be continued and expanded in 1949.

SEED POTATO PRODUCTION

Potato production has been encouraged to the extent that good seed stocks were available and were within easy reach of the growers. Hence no contracts for production of seed potatoes were entered into in 1948. The Field Crops Branch purchased 156,000 pounds of good quality seed from approved growers in ringrot free districts and made this available at cost to those who had to dispose of their own stocks because of ringrot.

Evidence that the potato industry has been encouraged and is being built up can be shown by the fact that there were 95 seed growers in the province. All but 15 of the fields that passed inspection received Foundation or Foundation A grade. Estimated production of table stock in commercial areas is as follows: Lethbridge 750 cars, Edmonton 400 and Brooks 300.

POTATO INSPECTION

Six inspectors were employed to administer The Vegetable Sales Act with a view to improving the grade of potatoes offered for sale by growers. This Department paid all travelling expenses of one inspector at Edmonton, Calgary and Lethbridge.

ACKNOWLEDGMENT

The assistance and co-operation of entomologists and pathologists connected with the Dominion Science Service and the University of Alberta is gratefully acknowledged. The entomologists gave freely of their time in identifying insects, making recommendations for their control, making surveys and preparing forecasts of probable outbreaks in 1949. The pathologists rendered a real service in diagnosing plant diseases and making recommendations for their control. Special valuable assistance was given by the Dominion Science Service in connection with the bacterial ringrot control programme.

INDEX FOUNDATION SEED POTATOES

The Field Crops Branch in co-operation with the University of Alberta and the Dominion Seed Potato Certification Service tested tubers grown by selected foundation seed potato growers. The table below shows the extent of this programme and the results obtained:

Variety	District	Number Tested	Number Qualified	% Qualified
Netted Gem	Lacombe	160	91	57
Carter's Early Favorite	Wetaskiwin	24	20	83
Netted Gem	Peers	127	76	60
Early Ohio	Bon Accord	22	21	95
Irish Cobbler	Bon Accord	26	11	42
White Rose	Peers	102	60	59
Netted Gem	Blackfalds	60	33	55
Netted Gem	McLeod Valley	97	71	73
Warba	Lacombe	83	70	84
Totals		701	453	

There were 701 tubers planted in the greenhouse, of which 453 or 65% qualified to go out as tuber indexed seed.

A source of pure seed stocks of varieties listed above is maintained by this programme. This Branch pays a bonus of one dollar for every 100 pounds of foundation seed potatoes grown and distributed to other potato growers.

OCEANSIDE SEED POTATO TESTS

The California Department of Agriculture provides a service at Oceanside for the testing of seed potatoes during our fall and winter months, for freedom from diseases. The results of readings are made available prior to the buying and planting season. Last season, the twenty-six samples submitted showed no disease present whatsoever. This gave Alberta wide publicity as a potential seed producing province. As a result, a number of U.S. growers and buyers toured Alberta and visited the growers who had samples submitted, with a view to buying the crop.

This year twenty-four samples were again submitted to Oceanside for testing. The Branch assumed transportation charges and paid part of the land rental. The grower was charged a fee of $5.00 to defray the remaining rental charges.

OTHER PROJECTS

HOUSEFLY CONTROL DEMONSTRATIONS

Inquiries were made at a District Agriculturists' meeting in Lethbridge in the spring as to the possibility of starting a campaign for the destruction of the housefly and other common, undesirable farmyard insects. Seven demonstrations were held in that connection, five in the Calgary area, one at South Edmonton and one at Morinville. A power sprayer, capable of developing higher pressures, was employed, and a DDT wettable powder was used as the insecticide. All farm buildings, manure piles, livestock and other insect breeding places were thoroughly sprayed with a 2% solution. Co-operating farmers agreed that a material reduction in the fly population was noticeable; barns were practically free of this pest. An identification of many insects killed revealed that horn flies are now present in the Edmonton area.

In order to reap the full benefits of a fly eradication campaign, it is necessary that the project be organized on a community basis. Work along this line is expected to be continued in 1949.

DEFOLIATION OF POTATOES

Many potato growers in the Edmonton area are finding a problem in handling green potato tops during harvesting operations. Two demonstrations were set up by this Branch showing the possibility of killing potato tops with a dinitro compound prior to digging. Fairly good results were obtained, but this work revealed the need for further investigations into proper spraying equipment and reducing the large volume of water now used per acre.

REPORT OF THE LIVE STOCK BRANCH

A. A. Campbell, Live Stock Commissioner.
I. A. Coles, Live Stock Supervisor.
W. H. T. Mead, Supervisor of Live Stock Breeding Associations.
A. J. Charnetski, Live Stock Supervisor.

CATTLE

Due to an extremely late spring with prolonged cold weather and snow cover, feed shortages were evident in many districts, resulting in large numbers of cattle in poor condition.

Late spring and summer rains stimulated pasture growth and the condition of cattle improved rapidly.

Grain and fodder supplies are ample except for a few eastern areas of the province.

Cattle in most areas entered the winter in good condition.

The numbers of cattle going into feed lots were lower than in 1947.

Lifting the embargo on cattle to the U.S.A. an August 16th resulted in price increases and heavy shipments to the U.S.A.

The demand for good breeding stock continues strong and prices are higher than a year ago.

Private and Association Sales of pure-bred cattle continue to bring very high prices for all offerings of good breeding and quality.

At the fourth annual sale of Shorthorn bulls held on May 4th, by Claude Gallinger, 35 bulls sold for an average of $1,749.00. The top bull sold for $6,000 to Lester Brown, Sandpoint, Idaho.

A total of 879 bulls were sold at the 48th annual Calgary Bull Sale for an average price of $470.87, which is the second highest price obtained since the Calgary Bull Sale was inaugurated in 1901, being surpassed only by the 1947 sale average.

W. J. Edgar, Innisfail, paid $3,500.00 for the Hereford bull "Bright Mixer 3rd"—207808—bred by Lougheed Bros., Bowden.

Yellowlees Bros., Crossfield, paid $1,300.00 for the Shorthorn bull "Victor's Hero U.A.—287506—bred by University of Alberta, Edmonton.

Arnold and Duncan Dickie, Lamont, paid $1,300.00 for the Shorthorn bull "Rannoch Gallant Leader"—295690—bred by T. G. Hamilton, Innisfail.

Jas. Scott & Sons, Conrich, paid $1,300.00 for the Aberdeen Angus bull "Woodlawn Blackcap P"—87022—bred by Roy Ballhorn, Wetaskiwin.

At the Edmonton Spring Show and Sale of finished cattle held on April 7th, the grand champion was a Hereford steer, shown by Ed. F. Noad, Olds, and was purchased by the T. Eaton Company (Western) Limited for .83c per pound. The reserve champion, a Hereford steer shown by Lawrence Kallal, Tofield, was purchased by the T. Eaton Company (Western) Limited for .65c per pound. Following is a summary of the average prices at the sale:

75	calves exhibited by Juniors averaged	$19.69	per cwt.
92	singles (open classes) averaged	19.00	" "
19	groups of five (light weights) averaged	17.48	" "
29	groups of five (medium weights) averaged	17.17	" "
18	groups of five (heavy weights) averaged	17.01	" "
7	carlots (light weights) averaged	17.38½	" "
15	carlots (medium weights) averaged	17.38	" "
13	carlots (heavy weights) averaged	16.89	" "

June survey of the number of cattle on Alberta farms for the past five years is as follows:

Year	No. of Head
1944	1,742,000
1945	1,860,200
1946	1,768,100
1947	1,654,000
1948	1,584,300

The decrease in numbers from 1947 is 69,700 head or 4.22%.

The official reports of the Dominion Department of Agriculture show for Alberta the following cattle and calf marketings and total value for 1944 to 1948 (inclusive):

Year	No. Cattle	Value	No. Calves	Value
1944	384,257	$32,715,600.00	87,888	$2,319,400.00
1945	534,815	46,197,320.00	118,923	3,197,839.00
1946	494,137	47,664,500.00	100,513	2,880,700.00
1947	423,154	46,193,786.00	87,185	2,571,085.00
1948	531,988	75,341,245.33	118,240	5,063,643.71

The above figures show a comparison of cattle production and the annual revenue derived.

CATTLE AND CALF SHIPMENTS OUT OF THE PROVINCE

	1944	1945	1946	1947	1948
British Columbia	76,202	82,308	91,717	102,924	103,193
Saskatchewan	8,820	13,310	23,068	12,734	12,248
Manitoba	32,626	41,693	37,796	27,197	33,186
Ontario	26,324	18,411	16,330	18,508	42,940
Quebec	36,312	33,802	31,207	34,627	37,522
Nova Scotia	54	366	33	375	34
New Brunswick	—	151	279	—	—
U. S. A.	139	400	7	150	72,402
Newfoundland	—	—	—	—	42
Prince Edward Island	—	—	—	56	5
	179,477	190,441	200,437	196,571	301,572

AUCTION SALES OF PURE-BRED CATTLE

CALGARY BULL SALE:

	1946		1947		1948	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn	178	$325.59	157	$340.35	171	$372.78
Angus	151	263.51	94	371.81	109	395.41
Hereford	624	442.74	599	530.97	599	512.61
TOTAL ALL BREEDS	953	$392.46	850	$478.15	879	$470.87

EDMONTON BULL SALE:

	1946		1947		1948	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn	77	$295.58	144	$233.30	69	$321.59
Angus	27	189.25	20	221.00	6	395.00
Hereford	55	311 73	70	343.93	55	340.82
TOTAL ALL BREEDS	159	$283.11	234	$265.34	130	$333.11

LACOMBE BULL SALE:

	1946		1947		1948	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn	66	$238.33	85	$231.00	99	$249.00
Angus	34	241.30	36	372.00	52	273.00
Hereford	113	214.86	61	388.00	120	312.00
TOTAL ALL BREEDS	213	$226.35	182	$311.51	271	$281.46

LLOYDMINSTER BULL SALE:

	1946		1947		1948	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn	44	$218.40	53	$227.54	58	$203.53
Angus	2	280.00	1	280.00		
Hereford	58	323.62	53	351.32	64	365.59
TOTAL ALL BREEDS	104	$278.27	107	$289.34	122	$288.54

CAMROSE BULL SALE:

	1946		1947		1948	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn			32	$170.93	21	$332.14
Angus			1	200.00		
Hereford			32	199.06	13	389.23
TOTAL ALL BREEDS			65	$185.22	34	$353.97

THE CATTLE IMPROVEMENT POLICY (Pure-bred Sires)

Under the Cattle Improvement Policy, pure-bred sires are placed with farmers at reduced prices whereby the Department of Agriculture contributes 25% of the cost of the sires, in addition to the freight charges to the applicant's nearest railway station. Each farmer, providing he is not a pure bred breeder, is entitled to only one bull through the above Policy.

This Policy has resulted in securing better sires for commercial cattle breeders.

During the year, 727 bulls were placed under this Policy.

THE LIVE STOCK LISTING BUREAU

Under this Policy, pure-bred breeding stock, male and female, is placed with pure bred breeders and others not entitled to come under the Cattle Improvement Policy. There is no financial assistance under this Policy. During the year, 9 bulls and 5 females were placed through this Policy.

Bulls placed through the Cattle Improvement Policy and Live Stock Listing Bureau were purchased from over 300 cattle breeders throughout the Province.

DAIRY HEIFER CALF CLUB POLICY

Members of eleven Dairy Calf Clubs, located at Barrhead, Bentley, Betchton, Donalda, Elnora, Erskine, Holden, Fallis, Red Deer, Sedgewick and Sundre, received a total of 206 calves, practically all of Holstein breeding. Six of these were new clubs. At higher prices more calves were obtainable from dairymen in the Edmonton milk shed for Calf Club members. More calves could be placed if available, as at the end of the year orders are on file from six Calf Clubs.

ARTIFICIAL INSEMINATION

A further decline in the number of cows bred in the Olds and district breeding club during 1948 would tend to bear out the suggestion put forth in the 1947 report, that this breeding service was not proving satisfactory to the majority of members. The decline in number of cows bred further increased the difficulty of financing the operation of the club.

Service to breeders of registered Holstein-Friesians was provided from two bulls, namely: "Glenafton Rag Apple Architect"-161294-and "Sovereign Masterpiece"-198299. While fewer cows were bred under this plan than in the previous year, service was provided to a greater number of herds.

A table showing the volume of breeding done under this plan is as follows:

	1944	1945	1946	1947	1948
Number of herds	16	43	58	63	83
Number of cows	108	247	317	407	365

Considerably more were bred to Sovereign Masterpiece than to Architect. This is attributed to the extreme popularity of the Masterpiece pedigree, the necessity of using him on a number of Architect daughters, and the fact that Architect's service was not available for approximately four months during the year because of unsatisfactory performance. During the year 112 cows were given first service to Architect and 253 cows were given first service to Sovereign Masterpiece.

While some difficulties still persist, particularly the availability of suitable technicians, this programme has been generally quite satisfactory. This may not have been so had the bull, Sovereign Masterpiece, not proven to be a reliable breeder.

Breeding in grade herds in the Olds and district breeding club showed a decided decrease in cow numbers in 1948, even though breeding results were equal to or superior to any previous year.

The following table shows the trends in membership and number of cows bred in each year of operation:

	1944	1945	1946	1947	1948
No. of Paid-up Members	174	225	313	358	384
No. of Active Members	120	150	200	210	145
No. of Cows	911	975	1212	1104	641
No. of Cows bred per active herd	7.6	6.5	6.0	5.4	4.4
No. of Cows bred per Paid-up Member	5.23	4.33	3.8	3.0	1.6

In an effort to determine why Association breeding of grade cows has not proven as popular in Alberta as it appears to be in some other areas, the writer made a further investigation of breeding work carried on in Eastern Canada, and the Eastern, and mid-western United States. This investigation revealed some interesting facts that may indicate why this is so, and may also determine the future trend in artificial breeding work in Alberta. The most important of these facts are as follows:

1. The average conception rate achieved in Alberta over five years is very close to, if not equal to, the average conception rate achieved in other areas; some of which have much more suitable conditions.

2. A satisfactory programme must provide sufficient cow numbers adequately to finance the local breeding association.

3. All units, operating in what appeared to be a satisfactory nature, were located in areas with a very high dairy cow population and a highly specialized dairy industry.

4. The efficient breeding associations are operating in areas where 5 to 15 per cent of the available dairy cows constitutes a sufficient number to finance the operation with at least one technician.

5. The country units with the highest volume do not inseminate more than about 20% of the cows in the area served.

6. Highly populated dairy areas provide the possibility of much greater efficiency in bull service. Recent trends in technique has resulted in greater centralization of breeding units. This development has resulted from the need to improve breeding results and has been made possible by volume of cow numbers that permits several *efficient country units* to support each breeding centre. These country units can only be efficient by enrolling enough cows to finance handily their own operation, after paying for the breeding centre service.

7. Many country units, particularly in the mid-western States, are not breeding enough cows to operate efficiently and are, therefore, in a very precarious position. In an effort to finance their operations, some units are charging as high as $10.00 per service to grade cows.

8. Not all artificial breeding units in Canada and the U.S. have sufficient volume of business to continue operating.

Generally speaking, agricultural conditions in the Prairie Provinces do not lend themselves to efficient application of

artificial insemination. The most formidable barriers are: the lack of volume in a highly specialized dairy industry and the high cost of providing the service in sparsely populated areas.

Because of the difficulty of pure-bred herd improvement, where relatively small numbers of animals are involved, a specialized programme of artificial breeding within some breeds may prove to be a practical way of raising the quality of those breeds, providing the breeders are prepared to pay the cost necessary to provide the service.

SWINE

Alberta swine production in 1948 showed a slight increase. Total hog marketing was 1,165,453 as compared with 1,105,222 in 1947. There was only a slight improvement in the quality of market hogs. In 1947, 22% of hog carcasses graded A, in 1948, 23.2% produced grade A carcasses. It is believed that if Alberta hogs were marketed nearer the minimum weight of 195 to 210 pounds, a larger percentage of grade A hogs would have been marketed. This fact is borne out by hogs marketed in Eastern Canada, where average carcass weights were lighter and the percentage of grade A's higher.

For easy reference, the carcass grade of Alberta hogs for the years 1945 to 1948, inclusive, is given hereunder:

TABLE 1	1945	1946	1947	1948
	%	%	%	%
A	27.22	23.70	21.96	23.21
B	54.85	56.75	54.30	57.12
C	7.11	7.56	7.12	6.84
D	0.35	0.41	0.33	0.46
Lights	0.70	0.69	0.92	1.03
Heavy	2.26	2.80	3.48	2.94
Extra Heavy	1.48	1.97	3.53	2.47
Injured	0.05	0.05	0.06	0.06
Rgl.	0.55	0.57	0.54	0.56
Stags	0.35	0.29	0.45	0.42
Sows	5.10	5.10	7.31	4.89

The 1949 Bacon Agreement with the British Food Ministry calls for 160,000,000 pounds of bacon and ham at a price of $36.00 per cwt. sizeable Wiltshires, seaboard basis. This is a reduction by 35 million pounds of last year's agreement. Canada's 1948 bacon commitment to Great Britain fell short by about 21 million pounds. In view of the forecast for lower hog marketings in 1949, it is not likely that there will be over-production of hogs.

The hog-barley ratio remained fairly constant through the year at 20.6 to 24.7. The hog-barley ratio is the number of bushels of No. 1 feed barley equivalent to 100 pounds of grade B1 live hogs. The Dominion premium is included in the hog price. The price of market hogs, Basis A grade, was reasonably satisfactory during the year.

It remained at $27.50 to $29.85, except during the latter part of September and October when prices reached a high of $34.50 per cwt. at Edmonton and $35.25 at Calgary.

This high was brought about by previously building up a reserve of exportable Wiltshires, and hogs marketed during this time were sold for domestic consumption. When further export supplies were required, the price reverted and was again governed by export bacon trade.

Demand for good breeding stock increased sharply in October and remains good to the present time. A drop in the price of oats and barley is responsible for this keen demand. Farmers

in mixed farming areas are beginning to realize that three or four brood sows on a quarter to a three quarter section farm, provide for conversion of low quality grains into more profitable and uniform returns over the whole year. Local merchants report greater credit demand from farms where live stock, particularly hogs, cream and poultry are not produced for sale.

The quality of breeding stock shows slow but definite improvement. Pure-bred swine breeders are selecting animals with more length, smoother shoulders, leaner necks and lighter jowls. The short, pudgy head type of breeding stock is on the decrease. In this connection the Swine Improvement Policy plays an important part, in that, in selecting breeding stock to be supplied under this Policy, only animals having desirable characteristics are purchased. The breeders soon learn what is wanted, and discard the short, thick animals for slaughter.

Alberta farm income from swine production represents a fairly large sum of money. There is no doubt that in the near future this source of farm income will become even more important because of possible restriction on grain trade, as European countries return to more normal life and agriculture.

The table set out hereunder clearly illustrates annual sales value and grade of hogs marketed in Alberta from 1941 to 1948:

ALBERTA SWINE MARKETINGS, 1941 to 1948 (Inclusive) BY GRADE AND PER CENT WITHIN EACH GRADE

	"A"	"B"	"C"	"D"	Light	Heavy	Extra Heavy	"E"	Sows	Total No.	Total Sales Value
1941—Number	593,257	1,080,763	147,317	6,886	19,857	30,211	7,854	18,162	42,746	1,947,053	$36,964,988.00
%	30.47	55.51	7.57	0.35	1.02	1.55	0.40	0.94	2.19	100.00	
1942—Number	563,218	1,251,500	160,249	4,986	2,233	78,196	16,584	21,545	83,815	2,182,326	49,517,340.00
%	32.05	51.69	3.36	0.31	0.89	4.41	1.91	1.62	3.76	100.00	
1943—Number	571,107	1,294,375	165,881	4,769	5,124	148,378	43,137	22,779	136,834	2,392,384	60,766,553.00
%	28.25	45.39	3.77	0.59	0.98	6.67	5.03	1.45	7.87	100.00	
1944—Number	724,587	1,640,109	277,865	11,356	17,461	78,400	37,552	24,282	170,328	2,981,940	78,722,000.00
%	24.30	55.00	9.32	0.38	0.59	2.63	1.26	0.81	5.71	100.00	
1945—Number	529,663	1,067,375	138,365	6,836	13,670	43,938	28,714	18,158	99,395	1,946,114	52,895,379.00
%	27.20	54.80	7.10	0.35	0.70	2.25	1.47	0.94	5.10	100.00	
1946—Number	294,873	710,631	93,736	4,832	8,487	36,541	25,328	12,305	63,868	1,250,602	35,667,200.00
%	23.58	56.82	7.50	0.39	0.68	2.92	2.02	0.98	5.11	100.00	
1947—Number	242,720	600,174	78,648	3,720	10,072	38,565	38,975	11,662	80,686	1,105,222	37,621,756.88
%	21.96	54.30	7.12	0.33	0.92	3.48	3.53	1.05	7.31	100.00	
1948—Number	270,527	665,717	79,759	5,378	12,054	34,211	28,802	11,968	56,987	1,165,433	55,056,000.00
%	23.21	57.12	6.84	0.46	1.03	2.94	2.47	1.04	4.89	100.00	

It was most unfortunate that the Dominion Advanced Registry Station at Edmonton suffered a complete loss through fire early in 1948. A large number of pigs on test were also lost. The Station is being rebuilt and will be open for operation early in 1949. The Alberta Department of Agriculture co-operates with the Dominion in this project by prepaying express shipping charges on pigs coming into the test station and by encouraging new breeders to enter their herds on test.

The pure-bred Swine Breeders experienced one of the most profitable years in history. There was good demand for breeding stock at satisfactory prices, particularly during the last quarter of the year.

The Fall Sale at Calgary was one of the best in years. American buyers were keen bidders on all types of boars and gilts. The activity of American buyers is some indication that bacon hogs are gaining in popularity in the Western States.

The Edmonton Fall Sale was a complete reversal of last year's Sale. The quality of boars and gilts was beyond criticism and while bidding showed slight undertone at the start of the Sale, it finished strong at most satisfactory prices.

The following tables tell the story of the Edmonton and Calgary Sales.

TABLE No. 3

Average Price of Boars and Bred Sows at Edmonton Spring Sale, 1946 to 1948, inclusive

YORKSHIRES	No.	1946	No.	1947	No.	1948
Gilts	53	$76.30	117	$77.14	123	$78.96
(High)		(155.00)		(200.00)		(140.00)
Boars					26	77.30
(High)						(140.00)

EDMONTON FALL SWINE SALE

(Number Sold and Average Price)

	No.	1946	No.	1947	No.	1948
Yorkshire Sows	125	$56.64	122	$51.43	148	$ 78.07
Tamworth Sows	5	44.50	2	40.00	7	101.78
Yorkshire Boars	118	60.78	102	50.88	150	87.71
Tamworth Boars	3	80.00	12	54.79	5	84.50
	251	$58.62	238	$51.27	310	$ 83.63

CALGARY FALL SALE SWINE SUMMARY (Sows)

	No.	1947	No.	1948
York. Fem. Oct.-Apr.	91	$55.03	66	$107.92
" " Prev. Oct.	2	72.50	4	151.25
Tam. Fem. Oct.-Apr.	6	47.50	8	96.25
Female Total	99	$54.92	78	$108.94

(Boars)

	No.	1947	No.	1948
York. Boar Oct.-Apr.	71	$57.36	75	$133.43
" " Prev. Oct.	1	57.50	1	115.00
Tam. Boar Oct.-Apr.	10	80.25	10	97.00
" " Prev. Oct.			1	82.50
Berkshire Boar			6	95.00
Boar Total	88	$59.97	93	$126.29
SWINE TOTAL	187	$57.30	171	$118.38

TABLE No. 6

Top Prices for Boars and Sows, Fall Sales.

	Calgary		Edmonton	
	1947	1948	1947	1948
Yorkshire Boar	$175.00	$300.00	$150.00	$355.00
Yorkshire Sow	155.00	180.00	180.00	180.00
Tamworth Boar	140.00	200.00	85.00	110.00
Tamworth Sow	65.00	120.00	40.00	115.00
Berkshire Boar		125.00		

THE SWINE IMPROVEMENT POLICY

The Department operates a Swine Improvement Policy and a Live Stock Listing Bureau. Under the first Policy, eligible *bona fide* producers of commercial hogs may purchase from

the Department one pure-bred Yorkshire or Tamworth boar, in each two-year period. Express or freight shipping charges are prepaid to the purchaser's nearest shipping point. Under the Listing Bureau, boars and sows of bacon breeds are sold to those who do not qualify under the Swine Improvement Policy. The purchaser, however, prepays his own shipping charges. All animals supplied under these Policies are purchased from leading swine breeders in this Province.

The number of boars and sows placed under these Policies in the calendar years 1941 to 1948 is given hereunder:—

TABLE No. 7

Year	Live Stock Listing Gilts	Boars	Improvement Policy-Boars	Total Boars
1941			207	207
1942	24	10	251	261
1943	31	50	362	412
1944	9	15	180	195
1945	26	15	187	202
1946	36	17	200	217
1947	50	5	190	195
1948	22	14	121	135

It is interesting to note that of the swine placed in 1948, there were 5 Tamworth gilts and 24 Tamworth boars. More boars in both breeds could have been placed if suitable animals were available.

DOMINION-PROVINCIAL BROOD SOW POLICY

The Alberta Department of Agriculture co-operates with the Dominion by prepaying one-half of freight charges on the above Policy. There were 118 gilts placed under this Policy.

Due to lack of interest, there were no bacon shows held during 1948. Also there were no requests for Swine Field Days. In general it may be stated that there is no apparent interest in swine promotional work from the field standpoint.

Personal services were rendered in the culling and selecting of swine breeding stock.

Assistance was given at fourteen live stock meetings. The average attendance was 33 persons.

From time to time material on sheep and swine matters was prepared for public information. As occasion required, the costs of swine production were reviewed and released to swine producers and others interested in this subject. Considerable time was required by office correspondence on matters pertaining to all phases of swine and sheep production.

SHEEP

During the year a further decline was experienced in the number of sheep on farms and ranches. This is apparently a Dominion-wide trend. Statistics indicate that sheep are on a decline in practically all countries of the world. Sheep decline in Alberta is attributed to labour shortage, the relatively high returns from beef cattle; also to some losses caused by predatory animals. Many sheep ranchers changed over to beef cattle in the past two years.

The price on market lambs this fall increased to $22.00 per cwt.. This sharp increase brought about a sudden demand for breeding ewes, and stock yard dealers were asking $14.00 to $16.00 per head for old ewes they selected as suitable for breed-

ing purposes. There were no available range ewes this year. It is estimated that there are only about 115,000 sheep and lambs on feed this winter. The average price of feeder lambs was $18.50 per cwt..

Table of June 1st survey of Alberta sheep population 1940 to 1948 is given hereunder:

June		June	
1940	882,600	1945	974,900
1941	702,451	1946	666,800
1942	828,000	1947	613,800
1943	900,000	1948	448,600
1944	1,023,000		

Prices on mutton and lamb showed a sharp increase during the summer of 1948. In January, good handyweight sheep prices ranged from $7.00 to $9.00; in June from $5.50 to $11.00; and in December from $7.00 to $15.00. For corresponding periods, good handyweight lambs sold at $12.50 to $15.75; $16.00 to $20.25; and at $20.00 to $23.00 per cwt.. The embargo on export of commercial sheep to the United States was lifted on August 3rd. Since that date there were sheep and lambs exported from Alberta to the U.S.A..

Export of pure-bred sheep to the United States consisted mostly of Suffolk and Hampshire ewes and rams. In the main, this market absorbs the surplus of medium to low priced animals, with the exception of a small number of stud rams and foundation ewes. It is reported that a P. J. Rock & Son, Suffolk ram sold for $3,350.00 at the Salt Lake Ram Sale. A. C. B. Grenville and the Clarindale Stock Farms also sold high priced rams at this Sale.

The table given hereunder indicates movement of pure-bred sheep from Alberta to the U.S.A.:

TABLE No. 8

Year	No. of Head
1945	1,061
1946	1,124
1947	1,938
1948	1,453

The Calgary Exhibition and Stampede Week stud ram sale was quite successful. It is regrettable that more Western Canadian breeders do not patronize this sale to acquire top quality stud rams for use on their pure-bred flocks.

The following table covers this sale since its inception:

TABLE No. 9

			Rams			Ewes		
Year Sold	Year of Birth	Breed	No.	Av. Price	Top Price	No.	Av. Price	Top Price
1946	1945	Suffolk	9	$ 87.25	$170.00	16	$ 56.25	$ 95.00
	1946	Suffolk	7	99.36	125.00	7	50.00	77.50
	1945	Hampshire	7	57.85	120.00	4	46.25	80.00
	1946	Hampshire	3	58.33	100.00	2	35.00	45.00
1947	1946	Suffolk	9	$111.50	$325.00	9	$ 62.50	$130.00
	1947	Suffolk	12	79.88	260.00	5	50.50	60.00
	1946	Hampshire	5	114.50	330.00	4	36.88	42.50
	1947	Hampshire	3	70.83	100.00			
1948	1947	Suffolk	8	$138.33	$400.00	11	$128.90	$400.00
	1948	Suffolk	9	166.66	470.00	7	71.43	125.00
	1947	Hampshire	1	60.00		2	42.50	50.00
	1948	Hampshire	3	75.83	105.00			

EDMONTON AND CALGARY FALL SHEEP SALES

Calgary and Edmonton Fall Sheep Sales were very satisfactory from price and quality standpoints. The American buyers

were well represented at the Calgary Sale. They were strong bidders for black faced sheep suitable for range use, also for several individual animals to go into pure-bred flocks.

The Edmonton Sale was much more satisfactory than last year. There were fewer offerings, resulting in keener price competition. Prices paid and averages for the different breeds at both sales are given in tables below:

TABLE No. 10

TABULATED REPORT OF (PURE-BRED) AUCTION SALES

EDMONTON	1946		1947		1948	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Suffolk Ewes	53	$19.23	15	$38.66	70	$31.71
Oxford Ewes	11	12.91	5	16.00	12	18.33
Shropshire Ewes			6	15.00		
Southdown Ewes	2	21.25			5	18.50
Hampshire Ewes	13	22.88	34	24.41	16	20.47
TOTAL	79	$19.88	60	$26.33	103	$27.77

	1946		1947		1948	
Breed	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Suffolk Rams	93	$30.30	41	$30.00	63	$38.84
Oxford Rams	6	30.42	8	29.44	5	27.50
Shropshire Rams	2	15.00	1	22.50		
Southdown Rams	2	18.50	2	30.00	2	26.25
Hampshire Rams	35	29.57	42	33.63	24	33.54
Cheviot Rams	1	32.50				
TOTAL	139	$22.57	94	$35.80	104	$33.10
Grade Ewes	50	$ 7.30	14	$10.07	23	$14.47

CALGARY

	1947		1948	
Breed	No. Sold	Av. Price	No. Sold	Av. Price
Hampshire Ewes	62	$21.89	46	$22.61
Hampshire Ewes '48	13	24.62	26	28.98
Suffolk Ewes	50	48.30	99	55.16
Suffolk Ewes '48	52	45.38	53	43.41
Southdown Ewes	3	36.67	2	33.75
Southdown Ewes '48	5	35.30	1	30.00
Cheviot Ewes			6	21.83
TOTAL	185	$31.02	233	$42.00
Hampshire Rams	59	$48.92	40	$57.88
Hampshire Rams '48	56	38.86	61	41.02
Suffolk Rams	17	79.41	30	71.00
Suffolk Rams '48	119	62.11	110	74.30
Corriedale Rams	5	37.20		
Rambouillet Rams	4	21.25		
Cheviot Rams	6	29.67	6	37.17
Southdown Rams	9	21.94	10	52.50
Southdown Rams '48	4	20.75	4	28.75
TOTAL	279	$52.09	261	$61.24
Grade Ewes	63	$12.19	62	$16.52

Trends in numbers and value of commercial sheep marketings in Alberta during the years 1937 to 1948, inclusive.

TABLE No. 11

Year	Stock Yards	Plants	Direct on Export (x)	Total	Value
1937	62,324	157,189	46	219,559	$1,185,619.00
1938	48,451	151,029	125	199,605	1,097,828.00
1939	68,653	154,801	337	223,791	1,353,936.00
1940	61,977	130,672	32	192,681	1,319,865.00
1941	74,290	138,738	804	213,032	1,657,198.00
1942	42,573	162,899	1,563	207,035	1,830,189.00
1943	57,386	152,626	642	210,654	1,805,304.00
1944	72,239	205,739	25,146	303,124	2,515,900.00
1945	75,556	196,836	56,562	328,954	2,921,112.00
1946	83,515	214,574	1,475	299,564	2,917,800.00
1947	84,952	202,560	1,671	289,183	3,053,772.48
1948	49,117	143,268	23,347	215,732	3,063,531.85

(x) Export of commercial sheep was not permitted in 1946 and 1947.

ALBERTA SHEEP MARKETINGS AND CLASSIFICATIONS

	LAMBS					SHEEP						
	Good Handy Weight	Good Heavy	Common All Weight	Bucks	Total	Good Handy Weight	Good Heavy	Common	Unclassified	Direct Export	Total	Grand Total Sheep and Lambs
1939—Number	168,935	6,615	23,013	1,025	199,828	1,828	12,539	4,284	5,215	337	24,203	223,791
%	84.7	3.3	11.5	.5		7.6	51.8	17.7	21.6	1.3		
1940—Number	144,108	4,698	19,842	1,200	169,848	2,461	12,176	3,444	4,720	32	22,833	192,681
%	85.0	2.7	11.6	.7		10.7	53.1	15.6	20.5	.1		
1941—Number	151,953	4,500	29,679	1,367	187,500	3,339	14,554	4,575	3,061	804	26,333	213,833
%	81.1	2.4	15.8	.7		12.7	55.3	17.4	11.6	3.0		
1942—Number	159,838	5,680	24,395	1,369	191,282	1,987	5,763	3,217	3,232	1,563	15,753	207,035
%	83.6	2.9	12.8	.7		12.6	36.5	20.5	20.5	9.9		
1943—Number	154,088	6,505	22,033	1,536	184,162	3,622	15,273	4,832	2,123	642	26,492	210,654
%	83.7	3.5	12.0	.8		13.7	57.5	18.4	8.0	2.4		
1944—Number	193,452	6,495	45,232	1,543	246,722	12,737	7,212	6,780	4,527	25,146	56,402	303,124
%	78.5	2.6	18.3	.6		22.6	12.8	12.0	8.0	44.6		
1945—Number	188,162	3,651	39,076	2,380	233,269	10,466	15,132	10,029	3,496	56,562	95,685	328,954
%	80.6	1.6	16.8	1.0		10.9	15.8	10.5	3.7	59.1		
1946—Number	209,420	10,500	25,255	2,777	247,952	19,477	18,392	9,432	2,836	1,475	51,612	299,564
%	84.5	4.2	10.2	1.1		37.7	35.6	18.3	5.5	2.9		
1947—Number	191,064	6,164	24,706	2,535	224,469	23,780	22,571	9,540	7,152	1,671	64,714	289,183
%	85.1	2.7	11.0	1.1		36.7	34.8	14.7	11.0	2.5		
1948—Number	129,028	2,608	4,785	2,314	138,735	18,036	16,140	7,487	4,987	23,347	69,797	215,732
%	93.0	1.9	3.4	1.7		25.7	23.1	10.7	7.1	33.4		

SHEEP IMPROVEMENT POLICY

This policy operates on a basis of prepayment of shipping charges on pure-bred rams going to eligible applicants. Where applicants do not qualify, sheep are placed under the Live Stock Listing Bureau. Table of sheep placed under the Sheep Improvement Policy 1941 to 1948, inclusive.

Year	Under Live Stock Listing		Under Policy	
	Ewes	Rams	Rams	Total Rams
1941			69	69
1942	11	14	81	95
1943	4	9	26	35
1944	11	3	31	34
1945	4		25	25
1946	5	2	45	47
1947	52	1	39	40
1948			28	28

HORSES

Spring auction sales of horses were held at Calgary, Lacombe, Lethbridge, Lloydminster, Red Deer and Stettler. A total of 2,235 horses averaged $70.31 per head. The previous year seven sales were held when 2,630 horses averaged $73.82. About the usual number of horse buyers were in attendance, but at some of the sales the horses were not in as good condition as at former sales.

The Horse Co-operative Marketing Association Limited, Edmonton, slaughtered 15,483 Alberta horses for meat purposes. This marketing source has proved quite beneficial as a means of disposal of a large number of surplus horses.

The trend in horse production may be depicted by the decreases shown in the June surveys of horse population during the last three years, as follows:

	No.	No. Decrease	% Decrease
1946	469,000	95,200	16.9
1947	410,900	58,100	12.4
1948	376,600	34,300	8.35

Export of horses for the period 1944 to 1948 is as follows:

	1944	1945	1946	1947	1948
British Columbia	1,377	1,023	1,029	696	456
Saskatchewan	511	131	2,692	7,712	3,672
Manitoba	790	502	776	791	854
Ontario	1,416	1,132	3,033	1,231	562
Quebec	7,667	4,523	12,433	4,156	2,850
Nova Scotia	1,607	1,225	1,909	1,027	360
New Brunswick	550	564	500	127	
Prince Edward Island			58	42	55
U. S. A.	9,859	6,733	6,308	1,740	1,563
Newfoundland	123	113	7		40
Netherlands		35			
	23,900	15,981	28,745	17,522	10,412

STALLION ENROLMENT

There were only 130 enrolments in 1948. During the last ten years there has been a decrease of 756 enrolled stallions or 85 per cent.

There was not much demand for good heavy draft horses. Light Horse Associations maintained the interest in raising light horses. Good light horse shows with a large number of

entries were held at Calgary and Edmonton. A number of Alberta-bred Thoroughbreds made a most creditable showing in race performances.

The following is a summary of enrolments and inspections, according to breeds:

Breed	Enrolled	Inspected	Passed	Turned Down	To Be Re-examined
Percherons	64	30	23	6	1
Clydesdales	6	1	1		
American Saddle	8	5	4		1
Arabian	1				
Belgians	25	15	13	2	
Canadian Shire	1				
Hackney	1				
Standard Breds	2	1		1	
Thoroughbreds	22	10	6	3	1
TOTAL	130	62	47	12	3

ROYAL WINTER FAIR, TORONTO

The twentieth Royal Winter Fair was held in Toronto, November 16th to 24th, 1948.

Fifteen carloads of live stock, comprising 39 horses, 94 cattle and 17 swine, totalling 150 head, were exhibited at the 1948 "Royal" by fifty-six Alberta stockmen.

As in previous years, the Dominion Government paid 75 per cent of eastbound freight charges on the live stock exhibits. The Government of Alberta paid the 25 per cent balance of eastbound freight charges, all local transportation charges to and from assembly point, decking, partitioning and feed costs. The railroad carrier returned live stock exhibits free to points of assembly. A satisfactory and expeditious run to and from Toronto was made by the Canadian National Railway Company. L. M. Rye, Edmonton, acted in the capacity of Overseer in charge of exhibits.

Awards received on exhibits were as follows:

	Horses	Cattle	Swine	Total
Grand Championships	1	3		4
Reserve Grand Championships	1	2		3
Senior Championships	1	3		4
Reserve Senior Championships	1			1
Junior Championships	1	1		2
Reserve Junior Championships	1	3		4
Championships		3		3
Reserve Championships		2		2
First Prizes	6	16		22
Second Prizes	15	16	1	32
Third Prizes	10	12		22
Other Prizes	23	39	10	72
	60	100	11	171

Briefly summarized, 23 championship awards and 148 prizes, comprising 22 firsts, 32 seconds, 22 thirds and 72 other prizes, were obtained on 150 exhibits. There were not any sheep shown from Alberta. In comparison with the previous year, 17 championships and 146 prizes, totalling 163, were obtained on the same number of exhibits, which included 61 awards on sheep exhibits.

The four Grand Championship awards were obtained on exhibits and by exhibitors as follows:

Percheron mare "Starlight Koncarness"—21783—owned by Hardy E. Salter, Calgary.

Shorthorn cow "Maxine Duchess"—330354—owned by T. G. Hamilton, Innisfail.

Hereford bull "Real Domino Supreme"—226580—owned by Warren D. Smith, Olds.

Hereford cow "Silver Trophy"—206090—owned by W. A. Crawford-Frost, Nanton.

LIVE STOCK FEEDERS' ASSOCIATION

Twelve Feeders' Associations obtained loans to purchase feeder live stock under "The Feeder Associations' Guarantee Act" during the 1947-48 feeding season.

As there were not a sufficient number of feeder lambs available to meet requirements of feed-lot operations more cattle were fed. There was little change in the number of Association members feeding live stock. Satisfactory profits were realized by those engaged in feeding activities. Due to successful operations in former years many members do not require a source of credit for their purchases of feeder live stock.

VOLUME OF OPERATIONS OF ALBERTA FEEDERS' ASSOCIATION DURING THE FEEDING SEASON OF 1947-48

Association	Address	Cost of Animals	Cattle	Sheep	Total Membership	No of Members Feeding
Battle River Live Stock Feeders' Ass'n. Ltd.	Camrose	$57,559.60	749		68	23
Bow Valley Live Stock Feeders' Ass'n. Ltd.	Brooks	37,019.96	258	2,253	122	14
Carstairs Live Stock Feeders' Ass'n. Ltd.	Carstairs	17,465.72	247			6
Central Alberta Live Stock Feeders' Assn.	Lacombe	69,585.53	908		69	24
Lethbridge Live Stock Feeders' Ass'n. Ltd.	Lethbridge	99,418.99	619	4,704	99	20
Raymond-Magrath Live Stock Feeders' Ass'n. Ltd.	Magrath	58,189.57	529	2,703	50	14
Red Label Feeders' Ass'n. Ltd.	Raymond	92,146.47	705	3,706	63	14
South Slope Live Stock Feeders' Ass'n. Ltd.	Brooks	50,280.53	392	2,836	58	21
Taber Live Stock Feeders' Ass'n. Ltd.	Taber	89,179.67	771	2,201	51	15
U.I.D. Stock Feeders' Ass'n. Ltd.	Lethbridge	109,219.54	960	5,407	79	27
Vauxhall-Albion Ridge Live Stock Feeders' Ass'n. Ltd.	Lethbridge	86,038.25	724	2,431	64	18
Vermilion & District Live Stock Feeders' Ass'n. Ltd.	Vermilion	50,457.80	663		181	20
Wainwright-Edgerton & Chauvin Live Stock Feeders' Ass'n. Ltd.	Wainwright	43,360.65	563			7
		$859,922.28	8,088	26,241	911	239

THE STOCK INSPECTION ACT

There were 775,561 head of live stock inspected, which was over a 25 per cent increase in number of inspections made in 1947. An all-time high monthly record of inspections was made in November, which entailed 139,350 head. Approximately 35 Community Auction Sales of cattle were held at various points in Southern Alberta.

This heavy movement of live stock through various marketing channels taxed to the utmost the services of the Stock Inspection staff.

A new feature was introduced in marketing practice by the assembling at various points and selling by auction finished cattle.

Carelessness in branding and incorrect information supplied by shippers, regarding brands has caused much inconvenience to those engaged in marketing cattle and in addition made much extra work to staff members in ascertaining rightful ownership and disposal of funds held in trust relative to large numbers of cattle held on account of brand.

THE BRAND ACT

During the year there were 1,327 new brands recorded; consisting of 1,194 cattle, 124 horses, 4 sheep, 4 poultry and 1 fox; 310 transfers were registered; renewals 4,454 (3,399 cattle, 1,044 horses, 5 sheep, 2 poultry and 4 fox). Strays, searches and certified extracts numbered 411; 615 Butcher's and Hide Dealer's Licenses issued; making a total of 7,117 transactions.

The approximate number of brands in good standing are as follows:

Cattle	19,894
Horses	6,666
Poultry	27
Sheep	23
Fox	41
	26,651

The printing of a new brand book was completed and copies are now available at a nominal cost. This brand book includes among other brands, 19,894 cattle and 6,666 horse brands.

THE ALBERTA LIVE STOCK AND LIVE STOCK PRODUCTS ACT

In line with the increased cattle marketings there was also an increase in number of Live Stock Dealers licensed. New applicants are carefully screened before a license is issued. An inspector's time is well occupied regarding investigations and convictions for infractions of this Act.

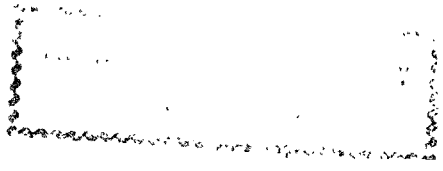
THE DOMESTIC ANIMALS (UNORGANIZED TERRITORY) ACT

Work continues in the establishing and maintaining of pound districts, changing boundaries, and arranging for disposal of impounded animals. A number of new pound districts were established.

THE PURE-BRED SIRE AREA ACT

A number of inquiries were received regarding the formation of Pure-Bred Sire Areas. Petitions are being circulated in the Athabasca district regarding the formation of a Pure-Bred Sire Area. There were no new areas formed during the year.

Valuable assistance was rendered the Department by members of the Royal Canadian Mounted Police in the administration of a number of the aforementioned Acts. Investigations were made and at times convictions obtained for infractions of Acts, regarding stolen live stock, the use of unregistered brands and buyers operating without a Live Stock Dealer's License.



REPORT OF THE DAIRY BRANCH

Dairy Commissioner—D. H. McCallum

Supervisors:

Dairy Factory Inspection and Instruction - L. M. Silcox
Dairy Branch Laboratory - - - - - - J. B. Linneboe
Dairy Cattle Improvement - - - - - - R. P. Dixon
Dairy Cost Study - - - - - - - - - - B. J. McBain
Frozen Food Locker Plants - - - - - - L. H. Arnold
Dairy Statistics - - - - - - - - - - A. F. Bennett

GENERAL REVIEW

During 1948 dairying received a setback resulting in a decrease of 28,178,000 lbs. of milk or 1.7% below that of 1947. Unfavourable weather conditions contributed in no small way to this decrease. An exceedingly late spring with heavy snowfalls in April and early May left herd owners very short of hay and green feed. Cattle went to pasture in a much poorer condition than normal. Northern Alberta received very little rainfall during June and the first half of July. This resulted in very poor pastures and a serious drop in milk flow which was impossible to regain during the latter part of the year when more favourable conditions existed.

The number of cows kept for milk purposes as at June 1st was 327,000, an increase of 11,100 or 3.5% above the same date a year earlier. It is doubtful if these figures indicate the trend for the whole year, as during the fall months many herds were dispersed with a considerable number of dairy cattle being exported to the United States. The good crops in Southern Alberta, combined with a marked increase in beef prices, reacted unfavourably for dairy production in that area during the closing months of the year.

The most outstanding feature of the 1948 report was the greatly increased value of products. The total value reached the all time high figure of $56,117,000 representing an increase of $9,306,000 or 19.9% above that of 1947. This was entirely due to an increase in prices, for example, creamery butter prices averaged 65.25c per lb. during 1948 as compared with 51c during 1947.

Slight changes in the utilization of milk occurred during the year, larger quantities were used in the manufacture of creamery butter, evaporated milk and ice cream; while fluid milk for consumption, milk fed to live stock, and that used for the manufacture of cheese, all showed noticeable decreases. Creamery butter production amounted to 32,414,000 lbs., an increase of 362,000 lbs. or 1.1%. Considering the all-Canada position, which indicated a decrease of over 7,000,000 lbs. or 2.4%, and also that Alberta was the only province west of the Maritimes to record an increase, the Alberta production becomes more significant.

The quality of both butter and cheese established new all-time records for the percentage qualifying for first grade. As further evidence of creamery butter quality, entries from Alberta won both the championship and reserve championship at the Royal Winter Fair.

Improvements in dairy factories and the installation of milk pasteurizing equipment at many points throughout Alberta were developments worthy of special mention.

The completion of the highway from Grimshaw to Lower Hay River Post and a graded road from this highway to Fort Vermilion will open new markets to these northern settlers. It is expected that dairying, along with other types of farming in this area, will develop and expand and that much of the produce will find a profitable market in the northern mining settlements.

On December 14th the Supreme Court of Canada announced that the part of Section 5 (A) of the Dairy Industry Act prohibiting the manufacture, offer for sale, or possession for sale, of Oleomargarine was *ultra vires* of Parliament. This decision may have far-reaching effects on the Dairy Industry of Alberta as nearly half of the total butter production of this Province is exported, mainly to British Columbia. Considerable uncertainty concerning Dairy Legislation now exists and it may take some months before the situation is completely clarified.

PRODUCTION AND VALUES OF DAIRY PRODUCTS 1948

(Preliminary)

Product	Quantity	Milk Equivalent lbs.	% of Total Milk	Average Unit Price	Total Value
Creamery Butter lbs.	32,414,000	759,460,000	45.4	$ .6525	$21,150,000
Farm Dairy Butter lbs.	9,834,000	230,411,000	13.8	.6230	6,127,000
Cheddar Cheese lbs.	2,566,000	28,585,000	1.7	.3450	885,000
Net Increase in Processing					97,000
Farm Dairy Cheese lbs.	220,000	2,451,000	.1	.3150	69,000
Ice Cream * gals.	1,840,000	26,294,000	1.6	1.36	2,502,000
Misc. Factory Products		31,033,000	1.9		1,654,000
Milk & Cream Fluid Sales		268,352,000	16.0	4.35	11,669,000
Milk & Cream Farm Home Consumed		180,337,000	10.8	2.73	4,923,000
Milk Fed Farm Animals		145,192,000	8.7	2.73	3,964,000
Skim-milk and Buttermilk lbs.	935,157,000			.3252	3,041,000
Whey lbs.	22,733,000			.16	36,000
Totals		1,672,115,000	100.0		$56,117,000

* Mix converted to Ice Cream on basis of 100% overrun.

PRODUCTION AND VALUES OF DAIRY PRODUCTS 1947

Product	Quantity	Milk Equivalent lbs.	% of Total Milk	Average Unit Price	Total Value
Creamery Butter lbs.	32,052,000	750,978,000	44.2	$ .5119	$16,407,000
Farm Dairy Butter lbs.	9,499,000	222,562,000	13.1	.4810	4,569,000
Cheddar Cheese lbs.	3,078,000	34,289,000	2.0	.2928	901,000
Net Increase in Processing					106,000
Farm Dairy Cheese lbs.	223,000	2,484,000	.2	.2628	59,000
Ice Cream * gals.	1,717,000	24,536,000	1.4	1.30	2,232,000
Misc. Factory Products		30,492,000	1.8		1,391,000
Milk & Cream Fluid Sales		277,385,000	16.3	3.65	10,113,000
Milk & Cream Farm Home Consumed		204,215,000	12.0	2.25	4,595,000
Milk Fed Farm Animals		153,352,000	9.0	2.25	3,450,000
Skim-milk and Buttermilk lbs.	920,294,000			.3203	2,948,000
Whey lbs.	26,707,000			.15	40,000
Totals		1,700,293,000	100.0		$46,811,000

* Mix converted to Ice Cream on basis of 100% overrun.

ESTIMATED FARM INCOME FROM SALE OF DAIRY PRODUCTS 1948

(Preliminary)

	Milk or Butterfat Pounds	Price	Value
Butterfat for Creamery Butter	26,579,000	$ .684 per lb.	$18,184,000
Milk & Butterfat for Ice Cream (milk basis)	26,294,000	2.79 per 100 lbs.	733,000
Farm Dairy Butter Sold	944,000	.623 per lb.	588,000
Milk for Cheesemaking & Concentrating	59,618,000	2.81 per 100 lbs.	1,678,000
Milk & Cream for Fluid Consumption	268,352,000	3.52 " " "	9,435,000
Total Income			$30,618,000

ESTIMATED FARM INCOME FROM SALE OF DAIRY PRODUCTS 1947

	Milk or Butterfat Pounds	Price	Value
Butterfat for Creamery Butter	26,283,000	$ .534 per lb.	$14,035,000
Milk & Butterfat for Ice Cream (milk basis)	24,536,000	2.24 per 100 lbs.	549,000
Farm Dairy Butter Sold	1,178,000	.4810 per lb.	566,000
Milk for Cheesemaking & Concentrating	64,781,000	2.19 per 100 lbs.	1,421,000
Milk & Cream for Fluid Consumption	277,385,000	2.86 " " "	7,942,000
Total Income			$24,513,000

DAIRY MANUFACTURING

CREAMERIES

There were 91 creameries in operation during the year. The average output per plant was 356,197 lbs. which is 3,975 lbs. greater than the average during 1947.

One new creamery was established, two plants were completely rebuilt, and one changed ownership during the year.

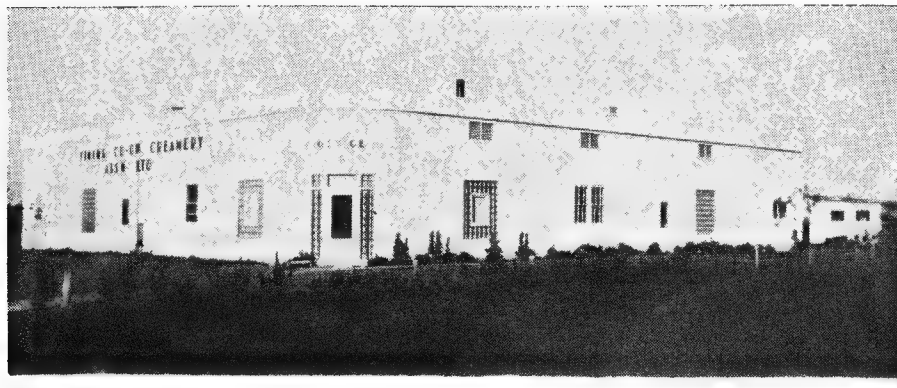
The new creamery at Chipman including a modern milk pasteurizing unit commenced operations on February 23rd.

The Northern Alberta Dairy Pool, Andrew, commenced operations in their new plant on July 5th. This replaced the one destroyed by fire late in 1947.

High River Creamery built a completely new modern plant on a location served with town water and sewer and moved into the new premises late in the year.

The Pincher Creek Creamery and Locker Storage was taken over by the Pincher Creek Co-op Association Ltd. on April 1st.

Several plants underwent extensive alterations and improvements during the year which have added materially to their appearance and efficiency.



Viking Co-operative Creamery, Viking, winner of the 1948 Best Kept Creamery and Surroundings Competition.

DAIRIES

Several new dairies came into existence during the year thus providing a safer milk supply to a larger number of Albertans. While dairies are not licensed by the Department of Agriculture, they are required to register annually and when receiving milk from five or more patrons, they must make payment on the basis of the butterfat content of the milk. This necessitates a licensed tester and inspections at such plants.

Following is a list of Alberta cities and towns with established milk pasteurizing plants:

Athabasca
Barrhead
Bassano
Bonnyville
Brooks
Black Diamond
Brant
Bellevue
Calgary
Camrose
Cardston
Claresholm
Cochrane
Chipman
Coronation
Cadomin
Didsbury
Drumheller
Edmonton
Edson
Grande Prairie
Hanna
High River
Innisfail
Lacombe
Lethbridge
Leduc
Macleod
Magrath
Medicine Hat
Olds
Okotoks
Peace River
Pincher Creek
Ponoka
Raymond
Red Deer
Rimbey
Rocky Mountain House
Stettler
St. Paul
Sylvan Lake
Tofield
Vegreville
Vermilion
Viking
Waterton Park
Wainwright
Westlock
Wetaskiwin

CHEESE FACTORIES

Eighteen cheese factories operated for at least part of the year. One plant remained open for a period of only 17 days while three other factories closed during the Fall with little chance of their re-opening until the Spring of 1949. Fire destroyed the Ryley factory early in August. While a new factory is being built, it will not go into production for some months. These items, plus strong competition from factories manufacturing other dairy products, resulted in a decrease of 16.6% in cheese production below 1947. The average output per plant amounted to 142,530 lbs., a decrease of 38,523 lbs. from the previous year.

Milk deliveries to cheese factories did not show the same percentage decrease as cheese from 1947 due to larger transfer to dairies for fluid sale. These transfers now represent approximately 10% of total receipts.

CREAM QUALITY

The following table shows the quality as well as the quantity of cream received by Alberta creameries during 1948 with corresponding figures for previous years:

BUTTERFAT RECEIPTS BY GRADES

	1948		1947		1946		1939	
	Pounds	%	Pounds	%	Pounds	%	Pounds	%
Cream Received	80,816,438		78,595,677		74,363,898		73,530,777	
Average Test		(34.9)		(35.1)		(35.1)		(34.4)
Butterfat:								
Table Grade	205,073	(.7)	230,079	(.8)	186,663	(.7)	727,445	(2.9)
Special Grade	14,480,712	(51.4)	14,469,231	(52.4)	13,737,178	(52.5)	17,234,846	(68.1)
First Grade	12,152,747	(43.2)	11,455,356	(41.5)	10,754,730	(41.2)	6,625,918	(26.2)
Second Grade	1,249,666	(4.4)	1,329,083	(4.8)	1,345,423	(5.2)	667,439	(2.6)
Off Grade	83.572	(.3)	133,778	(.5)	97,344	(.4)	35,425	(.2)
	28,173,770	(100.0)	27,617,527	(100.0)	26,121,338	(100.0)	25,291,073	(100.0)

While the preceding table indicates that the percentage qualifying for special grade decreased from 1947, it also reveals that the percentage being graded to second and off grades was also definitely less. This is encouraging and if the spread in price between first grade and special grade were increased, it would probably add some incentive for greater care in the production of cream. By calculating the loss at two, 10 and 16 cents respectively on first, second and off grade cream, it means that a sum of $381,433 was lost to the cream producers of Alberta because approximately 48% of the cream was placed down for various defects. The corresponding figures for 1939 indicate that when butterfat sells for a lower price the quality is much improved. This is possibly due to the price differentials representing a large percentage of the value of the cream.

BUTTER QUALITY

GRADES OF ALBERTA CREAMERY BUTTER (FEDERAL GRADING)

Year	Total lbs. Graded	% of Make Graded	Percentage in Each Grade				% 93 Score & Over
			First	Second	Third	B.T.G.	
1938	27,839,952	(89.1)	85.7	7.9	5.4	1.0	(51.4)
1940	27,243,216	(91.4)	88.1	7.1	4.4	.4	(55.8)
1942	33,614,392	(90.9)	84.1	10.2	5.0	.7	(46.4)
1944	34,797,504	(92.0)	87.0	7.0	5.7	.3	(46.0)
1946	27,842,304	(90.5)	88.4	5.5	5.7	.4	(35.4)
1947	29,066,632	(90.7)	90.3	4.3	4.9	.5	(36.4)
1948	30,214,408	(93.2)	90.5	4.8	4.3	.4	(36.2)

The percentage of the total make graded and also the percentage qualifying for first grade were the highest on record. The percentage graded as third grade and below third grade has been much less in recent years. The policy, adopted by some of the larger manufacturers, of transferring the low grade cream to a central point, has been largely responsible for this decrease.

CHEESE QUALITY

GRADES OF ALBERTA CHEESE (FEDERAL GRADING)

Year	Total lbs. Graded	% of Make Graded	Percentage in Each Grade				% 93 Score & Over
			First	Second	Third	B.T.G.	
1938	1,531,530	(62.5)	57.8	41.3	.7	.2	(18.7)
1940	1,935,750	(71.5)	70.6	28.4	.9	.1	(23.0)
1942	3,785,718	(96.8)	81.0	18.7	.2	.1	(43.7)
1944	3,339,147	(89.9)	79.0	20.4	.4	.2	(29.2)
1946	3,100,332	(96.0)	79.6	19.8	.4	.2	(26.9)
1947	2,928,768	(95.1)	83.9	15.6	.5	.0	(29.7)
1948	2,531,178	(98.7)	88.5	11.0	.5	.0	(34.3)

There was a very satisfactory improvement in the quality of cheese during the year when the percentage scoring first grade and also that scoring 93 points increased by about 5%. The percentage in first grade, 88.5%—is the highest on record. Buyers at the Pacific coast report very favourably on Alberta cheese, however, the quantity available for this market is far below the demand. Alberta cheese again won a prize at the Toronto Royal Winter Fair on straight placing against stiff competition from other cheese producing provinces.

CHECK WEIGHING OF BUTTER

The check weighing of butter and the issuing of weight certificates was a service continued throughout the year, although it was used largely on shipments of undergrade butter going to Eastern markets; 3,886 boxes representing 1,853,294 pounds of butter were check weighed.

DAIRY FACTORY INSPECTION AND INSTRUCTION

Progressively changing demands of the Industry have increased the scope and duties of the Inspection and Instruction staff. In addition to the checking of grades and tests at all dairy manufacturing plants, inspectors have made periodic inspections of milk pasteurizing plants and the frozen food locker plants. During the year many new dairies and locker plants were established in most inspection districts. The new operator is usually in greatest need of instruction and as far as possible such requests have been met.

There were 1,858 visits to dairy factories and processing plants where 78,475 shipments of cream were checked for grade and 24,285 check butterfat tests were made on shipments of milk and cream.

Samples of dairy products, both raw and processed, were forwarded by inspectors to the Dairy Branch Laboratory for analyses. For all purposes, inspectors were responsible for submitting some 5,000 samples. The results of these bacteriological and chemical examinations of products serve as a guide for definite recommendations in the processing and handling of perishable products.

Considerable time was spent in addressing meetings of producers and manufacturers, in addition to conducting milk and cream quality and judging competitions at dairy field days. This is regarded as a regular duty of inspectors with this Branch.

DIPLOMA COURSE IN DAIRYING

The Dairy Branch once again co-operated with the Department of Dairying at the University of Alberta and Canadian Vocational Training, in conducting an annual six month's course in Dairying. During the 1947-48 term 13 students completed the course. D. H. Williamson of Carstairs won the Alberta Dairymen's Association Gold Medal for the highest standing. The fourth consecutive course commenced on November 1st, 1948 with a full registration at 22 students. Those registering for this course have a higher educational standard than was the case in the past few years.

Back Row: Draper, H.; Hanks, D.; Bosiak, L.; Melnechuk, N.; Suderman, J.; Buzak, M.; Rugur, C.; Prince, D.; Lubert, D. J.

Middle Row: Wood, F. W.; Abbott, L.; Lee, R.; Cameron, A.; Poss, J.; Wooden, R.; Rasmussen, J.; Smith, L. M.; Beckett, W. J.

Front Row: Thornton, H. R.; Boudreau, D.; Pollard, B.; Kerr, D.; Aspeslet, A.; Stoddard, C.; Ewasiuk, G.; Lambrose, K.; Linneboe, J. B.

Absent: Siugdinis, P.

LABORATORY SERVICES

During the year ending November 30th, 1948 a total of 14,972 samples were received at the laboratory and the following table gives the number and distribution of the samples submitted. For the sake of comparison, similar figures for 1947 have been included.

	1948	1947
Butter Samples for moulds and yeasts	3,542	3,541
Water Samples	24	34
Bacteriological creamery surveys	9	11
Butter Samples for pH and composition	425	589
Cheese Samples	66	17
Milk Samples for Mastitis Control Service	3,476	4,555
Milk Plant Control Service	2,235	2,044
Milk Samples for Cow Testing Service	4,607	4,744
Egg Melange	411	211
Miscellaneous	177	239
	14,972	15,985

The mould and yeast count of butter was continued as a major activity of the Laboratory. It provided much valuable information to the buttermaker and has been an important factor in bringing about the present high standard of sanitation enjoyed by Alberta creameries. The following table gives a picture of the improvement in the mould and yeast count accomplished since the service was inaugurated in 1925.

Year	No. of Analyses	Classification in Percentage Excellent (0 to 10)	Good (11 to 50)	Fair (51 to 100)	Poor (Over 100)
1925	686	3.6	12.7	12.1	71.6
1930	2,799	35.7	20.3	10.3	33.7
1935	2,177	55.4	17.9	7.7	19.0
1940	3,013	64.6	16.0	7.2	12.2
1945	4,050	68.2	14.9	5.7	11.2
1948	3,542	72.6	15.8	4.7	6.9

The year has been singularly free from any serious outbreak of butter defects traceable to poor sanitation and it is felt that with the present high level maintained no difficulties are likely to be experienced.

The pH control of butter continues to hold the interest of the manufacturers and it was encouraging to note that a high percentage of the samples received during 1948 were submitted at the request of the buttermaker. The following table gives the pH reading for creamery butter samples submitted during the last four years and indicates the improvement made in that period.

pH Range	Percentage 1945	1946	1947	1948
Over 7.7	6.6	1.6	3.5	3.4
7.3 to 7.7	16.6	27.3	19.2	17.9
6.7 to 7.2	46.3	54.8	64.5	67.6
6.2 to 6.6	25.3	14.7	11.0	9.1
Below 6.2	5.2	1.6	1.9	2.0

The aim of the buttermaker is to manufacture a butter that is within a pH range of 6.7 to 7.2 and it will be seen from the table that 67.6% of the samples were within that range during 1948 as compared with 46.3% of the samples in 1945.

Although the cheese industry in this province occupies a less prominent position when compared with creamery butter, considerable work is done at the laboratory in assisting the cheesemaker. During the year a number of samples of cheese were tested for pH with the following results:

pH Range	Percentage
Over 5.10	18.1
4.80 - 5.10	60.0
Under 4.80	21.9

A pH range of 4.80 to 5.10 is considered the most suitable for green cheddar cheese and it will be noted that 60 per cent of the samples examined came within that range.

The mastitis control programme was continued and a number of new herds were signed up during the early part of the year. Unfortunately, the necessary veterinary service was difficult to obtain and some disappointment was experienced in that respect. In all, 3,476 milk samples were received for diagnosis and the following results were obtained:

Negative for Mastitis	58.8%
Positive or Questionable	41.2%

The programme has proven of great benefit to those few herd owners availing themselves of the service. With additional

Veterinarians attached to the Department staff it is expected that this programme will expand considerably during the coming year.

The laboratory control service for milk distributing plants, commencing in 1946 at the request of Edmonton milk distributors, has been continued and extended during the year to include a number of country plants. Samples from these country points were taken and forwarded by Inspectors.

The arrangement made during 1947 with the Dominion Poultry and Marketing Services whereby this laboratory undertook to analyze samples of egg melange at a set rate of one dollar per sample was maintained with the number of samples increasing from 211 in 1947 to 411 during the present year.

In addition to these main services the laboratory has been called on to perform a variety of bacteriological and analytical work related to agriculture.

There has also been the usual amount of work in connection with the cow testing service, the propagating and distributing of starters to cheese factories and the preparation and distribution of solutions and indicators to creameries and cheese factories. Finally, the laboratory has functioned as a consulting agency on problems related to the dairy industry.

DAIRY CATTLE

As reported under the general review, the number of dairy cattle on Alberta farms, according to the June census, was 327,000 head, an increase of 11,000, or 3.5% above the census figure for the same date in 1947. It is doubtful if this is a true indication of the yearly picture as high prices being paid for dairy stock coupled with a dairy labour problem encouraged the sale of large numbers of dairy cattle during the late summer and fall months. While the majority of the animals sold remained in the province, many were exported principally by American buyers to the United States.

On November 1st the "Tuxedo" herd of pure-bred Holsteins, owned by the late B. E. Hosford, was sold by auction. Regular show winnings and high production records of the cattle attracted a large number of buyers.

The most notable of the many sales held in southern Alberta took place at Calgary when 150 head of Holsteins were dispersed by the Pallesen Farm. The entire pure-bred Jersey herd of Mr. R. G. May consisting of 80 milking females was sold privately late in the fall.

High farm incomes coupled with the Department's pure-bred sire policy made it possible for an increased number of dairy bulls to be placed to advantage during the year.

The Dairy Branch showed an educational display at the Edmonton Exhibition depicting the production and manufacture of dairy products in Alberta. Interest centered around models of a loose-housing dairy barn, and a safe bull corral. This interest was maintained throughout the year with many requests for circulars and information being received.

The following tabulation shows the average production of milk and butterfat for all Alberta cows, based upon the total

quantity of milk produced, and the total cows kept for milk purposes during 1948. An estimated test of 3.6% is used for butterfat calculations and for sake of comparison similar figures for the previous years are included.

	1948	1947	1946	1945	1940
Average Milk Production lbs.	5,114	5,381	5,082	4,600	4,400
Average Butterfat Production lbs.	184.1	193.7	183.0	165.6	158.4

The figures shown depend upon an estimate for dairy cattle during the inter census years and also the milk used on the farm including dairy butter and farm cheese. Should any of these estimates be in error the average figures shown would be affected. It is worthy of note that prior to 1940 Alberta's milk production per cow was somewhat less than the average of all cows in Canada, but since that time Alberta's milk production per cow has exceeded the Canadian average production every year. This is a significant development, indicating a better type of dairy cow, combined with improved feeding and management practices, which is bound to place dairying on a more profitable and permanent basis.

COW TESTING AND HERD IMPROVEMENT

The cow testing service offered to all herd owners in the province was continued throughout the year. There are two plans in operation.

PLAN 1:

The herd owner weighs each milking of every cow in the herd and submits to the testing centre, once a month, a representative sample of milk from each cow, together with individual production totals.

PLAN 2:

The herd owner weighs one day's production of every cow in the herd, and submits these weights together with a representative sample of milk from each cow to the testing centre once a month. The monthly production is then computed from the one day's weighing.

TESTING CENTRES

There are three testing centres in operation for the testing of milk samples from herds on the service, namely, the Dairy Laboratory, Edmonton; Olds School of Agriculture, Olds; and the office of the Creamery Inspector, Camrose.

The following table indicates the number of herds, and cows under test at each centre:

	No. of Herds	No. of Cows
Edmonton	47	650
Olds	34	487
Camrose	23	271
	104	1,408

FIELD VISITS

During the year field visits were made to a number of the herds under test, at which time assistance in analyzing records was given, and herd management problems discussed. Milk samples were lifted for check tests, and milk scales inspected. Additional field activities of the Supervisor prevented his calling on all herds under test. It is hoped that those herds not visited

will be called on early in the coming year. It has been noted by the Supervisor that many herd owners have purchased exceptionally well-bred sires during the year. The future effect of this policy will be known when their offspring come into production.

The following tabulation sets forth the average production of the herds under test, and also the extent to which the service was utilized. For sake of comparison figures for the past two years have been included.

	1948			1947			1946
	Plan 1	Plan 2	Total	Plan 1	Plan 2	Total	
No. herds under test	84	20	104	82	14	96	86
No. cows under test	1,030	378	1,408	1,092	277	1,369	1,145
Herd averages on the basis of cow years (T)							
No. cow years	731.42	228.9	958.7	782.1	156.9	939	830.4
Average production of milk (lbs.)	8,213	8,595	8,307	8,637	8,317	8,588	8,668
Average production of butterfat (lbs.)	316.1	332.5	320.1	323.2	316.3	322	332.1
Average test (%)			3.85			3.75	3.83

(T) The total number of cows on test during the year is used in determining the herd average, except where new cows are placed on test, or a cow is sold or dies, in which case only that part of the year in which she produces is used.

There were eight more herds and 39 more cows under test during 1948 than in the previous year. Six new herd owners with 101 cows began testing under Plan two during 1948 indicating that this system of testing is being favourably received by owners of larger herds.

Four herds transferred to the Dominion Record of Performance during the year. This practice is highly commended and encouraged by this Branch.

The average production of milk and butterfat per cow showed a decrease of 281 lbs. of milk and 1.9 pounds of butterfat under the previous year. Unfavourable pasture conditions, reported in another section of this report, undoubtedly had an adverse effect on the production of cows under test, as it did on all dairy cows.

Certificates were issued for cows obtaining a certain standard of production and numbers issued are listed below:

	1948	1947	1946
Gold Seal	47	56	81
Red Seal	207	216	241
Blue Seal	288	263	308
Green Seal (Plan 2)	72	42	
Statements	88	83	72
Total	702	660	702

An increased number of certificates was issued during the year 1948 as compared with 1947. Less than 4% of the cows under test qualified for a gold seal—indicating the high standard of this award. There were 30 more green seal certificates issued than in the previous year, due to the larger number of cows being tested under Plan 2.

There was a decrease in the number of herds of five cows or more qualifying for the Honour Roll. Only those herds which were under test for a period of eight months or longer are shown. A total of 47 herds as compared with 53 last year, and 49 in 1946, are included in this list.

HONOUR ROLL, 1948

Name	Address	No. of Cows	Ave. Lbs. Butterfat
Alexander, W. W.	Picture Butte	11	342.9
Anderson, James W.	Bentley	15	320.8
Bacon, G. Ross	North Edmonton	24	393.1
Bajema, A. J.	Blackfalds	8	322.3
Bailey, Ward L.	Wetaskiwin	18	379.3
Black, Wm.	Camrose	5	451.6
Choice Dairy	Medicine Hat	29	456.9
Culshaw, R.	Sedgewick	11	307.9
Diggle, J.	Bentley	20	334.2
Dowdell, W. C.	Millet	17	368.2
Dunn, Thos.	Airways	12	387.6
Echlin, L.	Olds	8	414.5
Elzinga, M.	Vega	8	339.9
Erickson, J.	Bentley	15	388.8
Forbes, Wm. C.	Innisfail	7	327.8
Fulks, S. R.	Waskatenau	11	370.8
Gould, S. P.	Rosalind	9	444.9
Haines, J.	Millet	5	373.8
Harke, N.	New Sarepta	9	344.5
Heslup, Wm.	Millet	20	349.5
Hoeve, J.	Lacombe	11	370.6
Kamps, A.	Lacombe	28	390.7
Kauffmann, G. W.	Tofield	11	469.8
Karbashewski, M.	Willingdon	7	310.0
Magnesson, Ed.	Ryley	20	332.4
Meyers, G. P.	Millet	14	326.2
Mills, L. S.	Bowden	10	332.3
Quail, H. W.	Round Hill	13	383.4
Quantz, A. G.	Innisfail	10	388.5
Poffenroth, W. C. and A. F.	DeWinton	26	364.3
Robertson, J. G.	Camrose	22	307.3
Rogers, J.	Lacombe	19	426.6
Rude, E.	Tofield	9	322.5
Schubert, H.	Hay Lakes	12	355.6
Sisters of Charity	St. Albert	39	376.1
Smith, Wm.	Didsbury	9	300.2
Stannard, G. H.	South Edmonton	30	309.9
Stelfox, A. E.	Daysland	8	319.5
Stevenson, Mrs. V.	Rimbey	10	361.8
Solberg, E. A.	Ryley	23	309.0
Thesberg, N.	Innisfail	11	301.7
Vermilion School of Agriculture	Vermilion	28	323.1
Webb, C.	Swalwell	19	410.3
Westmancoat, R. K.	Ryley	9	335.3
Wilkinson, C. H.	Clover Bar	19	392.7
Winsness, Wm.	Ryley	22	396.2
Woolfrey, W. A.	Medicine Hat	27	326.8

DAIRY COST AND FARM MANAGEMENT SERVICE

During 1948 the Dairy Cost and Farm Management Service was continued in the controlled milk areas of Edmonton, Calgary and Lethbridge. In addition, several account books were opened for dairy herd owners in the Medicine Hat area. This was done at the request of the producers and the Milk Control Board. In an effort to insure a representative sample the number of accounts in the Edmonton and Calgary areas was increased with the hope of obtaining fifty completed accounts in each of these areas. This was made possible by an additional fieldman being provided for the summer months. Following the analysis of this larger group of accounts in the Spring of 1949, it is planned to use the quantitative requirements obtained for feed

and labour, to set up a formula for calculating cost of producing milk at changing price levels for feed and labour under local conditions.

The summary prepared for the dairy farmers whose farm accounts were used for the period ending May 31st, 1947, included the results for Calgary, Lethbridge and Edmonton, and was sent out in mimeographed form from the Dairy Cost Study office at the University. It contained data presented for each individual farm, with comparative figures for the group average. A chart was included to show, in a pictorial way, the success of each operator compared with the others in the same group. Similarly, each farmer could see in what measures he was less successful and thereby know more readily which phases of his farm operations were most in need of change or improvement.

In addition, preliminary results have been worked out on the 1947-48 set of cost accounts. Because of limited space, only some results of one area (the Edmonton area) will be referred to in this report.

For the account year ending May 31st, 1947, the cost per cwt. of milk on a 3.5% butterfat basis was $2.96, while the cost as recently calculated for the account year ending May 31st, 1948, for the same farms was $3.40. The increase in cost of production was shown from the breakdown of calculations to be mostly in feed. Following is a table showing the two years' results on sixteen farms in the Edmonton milk shed. The production per cow is on a herd basis and over a twelve-month period. The sample includes two Jersey herds and receipts include cash dividends for the five farms shipping to a co-operative plant.

TABLE ON BUTTERFAT PRODUCTION COST AND RECEIPTS PER POUND, EDMONTON AREA

Item (Average of Sixteen Farms)		Group Average 1947-48	Group Average 1946-47
Butterfat per cow	lbs.	275	296
Butterfat test of milk	per cent	3.4	3.6
Costs per pound of butterfat			
Feed	$	.504	.402
Labour	$	.267	.262
All other items	$	.277	.256
Total Gross Cost	$	1.048	.920
Credit from herd increases etc.	$	.076	.073
Net Cost per pound butterfat	$	.972	.847
Net Cost per 100 lbs. milk at 3.5 test	$	3.40	2.96
Receipts per lb. of butterfat sold	$	1.05	.935
Receipts per 100 lbs. milk at 3.5 test	$	3.68	3.27

The range of costs for the latest period of accounts, June 1st, 1947, to May 31st, 1948, was from a low of 68.0 cents to a high of $1.48. By stating these results in the form of an average cost it must not be taken to mean that this is anything final in regard to cost of production, because there will likely be as many costs of production as there are farms producing. Rather, it is an attempt to bring the findings to a common denominator and the "average" cost will act as a guide in showing a trend from one period to another as long as the periods and methods of comparison are kept comparable. It must, too, be pointed out that whenever referring to an average cost, that there will probably be just as many farms with a higher than average as there are farms with costs below it.

MOST PROFITABLE FARMS

Analysis of the accounts for the year 1946-47 showed the following factors to be most significant in determining the success of those farms in the most profitable group.

(a) Larger amount of capital with which to work. The average investment of the sixteen farms was $26,353.

(b) Larger gross sales in relation to expenses. Average gross sales were $11,017 and average expenses were $7,969.

(c) Purchased less feed per cow because of plentiful supply of home-grown feed and pasture. Average amount of feed fed was 2,300 lbs. of grain and 2.9 tons of roughage per cow equivalent, on a herd basis and including young stock.

(d) Enough work for two full-time men. The average labour, including operator and any extra labour, haying and harvesting, was the equivalent of 2.4 men full-time for a twelve-month period.

(e) Larger acreage of crops. The average acreage of crops was 209 in grain and hay, while total acreage averaged 369 and includes the above figure of crops plus tame and wild pasture, summerfallow and wasteland.

(f) Larger number of cows. The average number of cows kept was twenty-six, along with an average of about eight calves and eight heifers. The entire herd, including the bull, in terms of animal units or cow equivalent, numbered 37. (A heifer over one year of age equals 2/3 of a unit and a calf equals 1/3 of a unit.)

The average receipts from dairying was 63% of the total farm receipts, indicating that the type of farm occurring most often is not entirely a dairy farm but receives part of the income from other enterprises, such as surplus grain as a cash crop, or hogs, or poultry.

In addition to the current reports for dairymen participating in the study, other material is prepared for extension use by the Department.

A similar study was commenced in Saskatchewan during the year and considerable assistance was given to those responsible for setting up farm accounts in that province.

Observations during field work this past summer indicate the use of a greater number of new haying implements, and a greatly increased interest in improved haying methods. More farmers realize the enormous losses in lowered feeding value caused through bleaching and weathering, especially in small stacks.

There appears to have been a definite effort to balance the machinery and live stock on many farms. This will reduce hiring extra seasonal labour, and enable the regular labour force to work more efficiently.

Probably the most important observation was that farm accounts are now being put to excellent use. Many farmers hold the attitude that properly kept and analyzed figures are a useful and necessary part of the farm machinery—this part being "farm business machinery".

FROZEN FOOD LOCKER PLANTS

The Frozen Food Locker Industry has made steady progress during 1948. Eighteen new plants were constructed and put into operation, bringing the total to 118 locker plants, with 114 plants reporting month-end statistics. The plants had 35,571 lockers installed at the end of the year. This compares with 97 plants reporting 28,109 lockers available at the end of 1947.

Two more Animal Food Cold Storage Plants were licensed under the Act, bringing the total to five for the year.

Due to the increasing demand for locker service and frozen foods, a number of plants in the province were enlarged during the year, with an additional 3,629 lockers available.

Practically all plants constructed during the year were complete service plants, modern in design, and equipped with the latest facilities for processing and refrigerating.

During the year, fire broke out in two plants, however, damage to products in storage was negligible. The new plant at St. Paul was almost ready for operation when it was completely destroyed by fire on January 14th, 1948.

Inspectors of the Dairy Branch made 486 inspections during the year compared with 391 inspections for 1947. The standard of service has improved in the majority of plants. Inspectors have assisted considerably in raising the standard of service by strictly enforcing the Regulations under The Frozen Food Locker Act, especially in regard to sanitation and temperature control. Twelve meetings were held at official openings of new plants with a total attendance of 2,335 or an average attendance of 186. The Supervisor, assisted by the local District Home Economists, conducted the meetings in the form of lectures dealing with the preparation and packaging of products for freezing. Copies of the Department's Bulletin No. 72, "Preserve by Freezing", were distributed to those attending. The meetings were concluded with a motion picture in sound that dealt with Frozen Foods.

An educational exhibit prepared by the Department, showing a model of a modern locker plant, together with photographs of Alberta plants and methods of preparing foods for freezing, was displayed, and created considerable interest at the Edmonton Exhibition.

Well over 200 operators and employees attended the Fourth Annual Convention of the Alberta Quick Freeze Locker Association, which was held in Calgary on March 8th and 9th, 1948. Locker plants from all parts of the province were represented. The programme consisted of addresses and practical demonstrations by recognized authorities in the Frozen Food Locker Industry.

The Bruce Robinson Merit Award Shield and cash prizes for the most ideal plant operating during 1947 were awarded at the Convention following the banquet. First prize was won by Western Locker Company, Medicine Hat, J. Currie, Manager. The Frozen Food Locker Company, Edmonton, J. D. Wolch, Manager; and Taber Frozen Foods, Taber, S. A. Odland, Manager; won second and third prizes, respectively.

The judging and scoring of plants was conducted by officials of the Dairy Branch.

One of the highlights of the Convention was the Curing Competition that was put on for the first time. The aim of this competition is to promote and encourage operators to process a uniform, high quality product. To stimulate interest and competition, the Griffiths Laboratories have donated for Annual Competition, three bronze shields as first prizes. This competition is divided into three sections: Regular Smoked Hams, Tenderized Hams, and Side Bacon. First prize in each section was won by Mr. D. Topolnitsky of Andrew; Mr. W. Shaw of Athabasca and Mr. J. Currie of Medicine Hat, respectively. Over 40 operators entered exhibits, making for keen competition. All entries were donated to charitable institutions at the conclusion of the convention.

Following is a list of all frozen food locker plants operating as at November 30th, 1948. New plants put into operation during the year are marked with ‡

Name of Plant	Location
Fischer's Cold Storage Lockers	Acme
Pioneer Meat Market and Locker Plant	Alliance
Wright's Cold Storage Lockers	Airdrie
Alix Locker Plant	Alix
Athabasca Meat Market & Cold Storage Lockers	Athabasca
Bashaw Meat Market and Locker Plant	Bashaw
‡Barons Meat Market and Cold Storage Locker Plant	Barons
Allen & Hallworth Locker Plant	Barnwell
Bentley Cold Storage Plant	Bentley
Berwyn Locker Plant	Berwyn
Frosted Food Center	Beiseker
High River Lockers Ltd.	Blackie
Emsland and Son	Bowden
Carlson's Locker Plant	Bow Island
Brooks Marketeria and Lockers Ltd.	Brooks
Castor Quick Freeze Lockers	Castor
Duggan's Foodland	Camrose
B. J. Wood & Son	Cardston
Carbon Locker Storage	Carbon
Carstairs Locker Plant	Carstairs
Calgary Cold Storage Co. Ltd.	Calgary
Campbell & Griffin Ltd.	Calgary
Crystal Dairy Ltd.	Calgary
Alberta Locker Service	Calgary
‡Canadian Quick Freeze Ltd.	Calgary
‡Strathmore Cold Storage Lockers Ltd.	Cluny
Clive Cold Storage Locker Plant	Clive
Harwood's Meat Market	Claresholm
Champion Meat Market and Locker Plant	Champion
Coaldale Meat Market	Coaldale
New Coaldale Co-op Cheese Factory	Coaldale
Cochrane Cold Storage	Cochrane
Citizen's Lumber Co. Ltd.	Coutts
Wallace's Ltd.	Coronation
Crossfield Lockers	Crossfield
‡Pincher Creek Co-op Association Ltd.	Cowley
Delburne Cold Storage	Delburne
Crystal Dairy Ltd.	Didsbury
Bradford's Cold Storage Lockers	Drumheller
Christiansen Bros. Locker Plant	Dickson
‡Donalda Co-op Locker Plant Ass'n Ltd.	Donalda
‡National Produce Co. Ltd.	Edmonton
Edmonton Cold Storage Co. Ltd.	Edmonton
Frozen Food Locker Co.	Edmonton
‡Sturdy's Quick Freeze Ltd.	Edmonton
‡Farmers' Frozen Food Locker	Edson
Eckville Co-op Ass'n Ltd.	Eckville
‡Erickson's Quick Freeze and Lockers	Edberg
Fairview Co-op Refrig. Locker Ass'n Ltd.	Fairview
‡Pioneer Meat Market and Locker Plant	Forestburg
Fort Locker Storage and Meat Market	Fort Sask.
Brown's Frozen Food Locker Plant	Foremost
Albert Park Locker Plant	Forest Lawn
Strathmore Cold Storage Lockers Ltd.	Gleichen
Polar Freezer	Galahad
Van & Dans Locker Plant	Glenwood
Granum Meat Market and Locker Plant	Granum
Grande Prairie Meat Market & Locker Plant	Grande Prairie
‡Grimshaw Meat Market and Lockers	Grimshaw
Strathmore Cold Storage Lockers Ltd.	Hussar
High River Lockers Ltd.	High River
Hanna Co-op Locker Ass'n Ltd.	Hanna
‡Dorin's Meat Market and Cold Storage Locker Plant	Holden
Innisfail Dist. Co-op Ass'n	Innisfail
Frosted Food Center	Irricana
‡Irma Locker Plant	Irma
Killam Cold Storage Locker Plant	Killam
Gilmour's Meat Dept. and Locker Storage	Lacombe
Pat's Locker Plant	Leduc
Crystal Dairy Ltd.	Lethbridge
Jensen's Frozen Foods	Lethbridge
Purity Dairy	Lethbridge
‡Nelson's Frozen Foods and Locker Storage	Lethbridge
Magrath Co-op Ass'n Ltd.	Magrath
Len's Locker Plant and Meat Market	Manville
Crystal Dairy Ltd.	Medicine Hat
Western Locker and Storage Co. Ltd.	Medicine Hat
Gust's Food Store	Medicine Hat
Dixon's Meat Market and Locker Storage	Macleod
Nelson's Locker Storage Plant	Milk River
Morrin Locker Plant	Morrin

Name of Plant	Location
Moen's Grocery & Lockers	Millet
Labonte's Meat Market and Frozen Food Lockers	Morinville
‡Mundare Food Lockers Ltd.	Mundare
Nanton Cold Storage Locker Plant	Nanton
Okotoks Locker Plant	Okotoks
Olds Cold Storage Lockers	Olds
Picture Butte Consumers' Co-op Ass'n Ltd.	Picture Butte
Pincher Creek Co-op Ass'n	Pincher Creek
Ponoka Cold Storage Service	Ponoka
Sturdy Bros. Frozen Foods	Provost
‡Queenstown Cold Storage and Locker Plant	Queenstown
‡Ryley Locker Plant	Ryley
Raymond Cold Storage	Raymond
Red Deer Creamery	Red Deer
Red Deer Cold Storage Lockers	Red Deer
Central Alberta Dairy Pool	Rimbey
Brooks Marketeria and Lockers Ltd.	Rosemary
Rockyford Lockers Ltd.	Rockyford
‡Spoor's Meat Market and Quick Freeze Lockers	Rocky Mt. House
Strathmore Cold Storage Lockers Ltd.	Strathmore
Stavely Locker Plant	Stavely
Stettler Co-op Ass'n Ltd.	Stettler
Strathmore Cold Storage Lockers Ltd.	Standard
Stony Plain Co-op Locker Plant Ass'n Ltd.	Stony Plain
Central Creameries Ltd.	Sundre
‡Dick's Quick Freeze Lockers	Tofield
Turner Valley Locker Plant	Turner Valley
Taber Frozen Foods	Taber
Central Meat Market and Cold Storage	Trochu
Buk Bros. Cold Storage Locker Plant	Two Hills
Three Hills Locker Storage	Three Hills
Central Meat Market and Lockers	Vulcan
Warren's Meat Market and Locker Storage	Vegreville
Viking Meat Market and Lockers	Viking
Mac's Grocery and Lockers	Warner
Westlock Locker Service	Westlock
Wetaskiwin Locker Storage	Wetaskiwin

ANIMAL FOOD COLD STORAGE PLANTS:

Northern Refrigeration Association, Lac La Biche.
National Produce Company Limited, 9943 - 82nd Avenue, Edmonton.
Canyon Creek Cold Storage Limited, Canyon Creek.
Kenny Bros. Fur Ranch, Faust.
Joussard Fur Farmers' Co-op. Ltd., Joussard.

The following tabulation is a summary of the information received from monthly reports and covers the period December 1st, 1947, to November 30th, 1948. For sake of comparison, similar information for the same period the previous year has been included:

	1947		1948	
	Pounds	Percent	Pounds	Percent
Fresh Meats	5,790,273	74.4	7,833,066	75.7
Fish	61,723	.8	66,539	.6
Poultry	493,150	6.3	549,144	5.3
Game Birds	51,952	.7	72,747	.7
Big Game	116,061	1.5	94,076	.9
Cured Meats	935,413	12.0	1,225,432	11.8
Lard Rendered	90,717	1.2	120,971	1.2
Fruits	102,726	1.3	193,424	1.9
Vegetables	100,290	1.3	145,504	1.4
Miscellaneous	40,114	.5	52,527	.5
	7,782,419	100.0	10,353,430	100.0

	1947	1948
Number of plants reporting	97	118
Number of lockers installed	28,109	35,571
Average number of lockers installed	290	312
Number of lockers rented, December 1st	25,241	32,616
Percentage of lockers rented December 1st	89.8	91.7
Average lbs. food stored per locker with complete service	332.4	334.8
Average lbs. food stored per locker without complete service	165.6	194.2
Average poundage per locker, all plants	308.3	317.4
Average pounds per locker on basis of lockers rented for twelve months	348	359.2
Inspections during year	391	486

DAIRY STATISTICS

The following tables are included for general information:

ALBERTA MILK PRODUCTION AND UTILIZATION

Year	Total Milk Production in Million lbs.	Percentage of Milk Used					
		Creamery Butter	Dairy Butter	Factory and Home Made Cheese	Miscellaneous Factory Products	Milk and Cream Consumed	Fed Farm Animals
1920	784	35.9	27.8	.6	.9	34.8*	
1925	923	50.6	24.5	1.7	.5	22.7*	
1930	1,077	38.5	25.8	1.2	.9	25.1	8.5
1935	1,384	39.1	22.0	1.3	.4	25.6	11.6
1940	1,671	41.8	21.0	2.0	1.5	24.9	8.8
1945	1,731	46.9	12.1	2.7	2.8	26.7	8.8
1946	1,658	43.5	13.0	2.3	2.6	29.3	9.3
1947	1,700	44.2	13.1	2.2	3.2	28.3	9.0
1948 Prelim.	1,672	45.4	13.8	1.8	3.5	26.8	8.7

*Includes Milk otherwise used.

CREAMERY BUTTER PRODUCTION (By Years)

Year	Creameries	Pounds Butter	Av. Output Per Creamery	Selling Value Total	Selling Value Cents per lb.
1920	53	11,821,291	223,043	$ 6,555,509	(55.45)
1925	99	19,630,101	198,284	6,959,059	(35.45)
1930	92	17,716,744	192,573	4,968,227	(28.04)
1935	97	23,094,707	238,090	4,588,917	(19.90)
1940	95	29,796,520	313,647	6,647,604	(22.31)
1945	91	34,692,917	381,241	11,389,875	(32.83)
1946	92	30,744,000	334,174	11,440,000	(37.21)
1947	91	32,052,000	352,222	16,407,000	(51.19)
1948 Prelim.	91	32,414,000	356,197	21,150,000	(65.25)

CREAMERY BUTTER PRODUCTION (By Months)

	1947 Pounds	1948 Pounds	% x Increase - Decrease
January	1,305,859	1,459,898	x 11.8
February	1,316,466	1,347,489	x 2.4
March	1,679,543	1,829,889	x 9.0
April	2,046,057	2,051,901	x .3
May	3,425,395	2,962,433	- 13.5
June	4,604,229	4,775,217	x 3.7
July	4,822,115	4,886,460	x 1.3
August	4,126,241	4,377,637	x 6.1
September	3,300,187	3,225,464	- 2.3
October	2,400,953	2,345,369	- 2.3
November	1,597,783	1,697,648	x 6.3
December	1,427,504	1,454,547	x 1.9
	32,052,332	32,413,952	x 1.1

CREAMERY BUTTER PRODUCTION (By Regional Divisions)

	1947 Pounds	1948 Pounds	%
Northern	15,216,560	15,720,950	x 3.3
Central	11,219,577	11,090,908	- 1.2
Southern	5,616,195	5,602,094	- 0.3
	32,052,332	32,413,952	x 1.1

FACTORY CHEESE PRODUCTION (By Years)

	Factories	Pounds Cheese	Av. Output Per Factory	Selling Value Total	Selling Value Cents per lb.
1920	7	398,750	56,964	$110,355	(27.70)
1925	14	1,473,835	105,274	306,604	(20.80)
1930	8	1,035,352	129,419	175,392	(16.94)
1935	11	1,364,526	124,048	168,280	(12.33)
1940	18	2,705,853	150,325	385,584	(14.25)
1945	18	3,985,160	221,398	903,309	(22.67)
1946	18	3,231,000	179,500	746,000	(23.09)
1947	17	3,078,000	181,053	901,000	(29.28)
1948 Preliminary	18	2,566,000	142,530	885,000	(34.50)

FACTORY CHEESE PRODUCTION (By Months)

	1947 Pounds	1948 Pounds	% x Increase - Decrease
January	170,868	165,004	- 3.4
February	169,986	163,293	- 3.9
March	218,954	208,650	- 4.7
April	244,621	189,341	-22.6
May	378,611	229,973	-39.3
June	452,320	370,186	-18.2
July	409,871	363,737	-11.3
August	346,999	313,052	- 9.8
September	268,649	219,956	-18.1
October	194,526	149,823	-23.0
November	110,927	87,575	-21.1
December	111,574	104,952	- 5.9
	3,077,906	2,565,542	-16.6

ESTIMATED SPECIAL GRADE BUTTERFAT PRICES (F.O.B. Shipping Point)
(By Months)

	1948		1947		1946		1945	
	Cents	%	Cents	%	Cents	%	Cents	%
January	70.15	(4.6)	38.5	(4.0)	33.10	(4.9)	32.7	(4.8)
February	70.15	(4.6)	38.5	(4.8)	33.10	(5.2)	32.7	(5.2)
March	70.15	(5.6)	38.5	(5.3)	33.10	(5.7)	32.7	(6.1)
April	70.15	(6.7)	38.5	(6.5)	38.10	(7.1)	32.7	(7.0)
May	70.15	(9.3)	50.0	(10.2)	37.10	(11.1)	32.7	(9.2)
June	69.45	(14.4)	50.6	(14.6)	36.10	(15.8)	31.95	(14.3)
July	70.15	(14.5)	52.9	(14.6)	36.85	(16.0)	32.45	(14.6)
August	70.15	(13.3)	56.9	(12.7)	38.10	(13.8)	32.7	(12.6)
September	70.15	(9.9)	62.4	(10.3)	38.10	(5.0)	32.7	(10.0)
October	70.15	(7.3)	61.65	(7.4)	38.10	(6.5)	32.95	(7.0)
November	70.15	(5.4)	62.25	(5.3)	38.10	(4.9)	33.45	(4.9)
December	70.15	(4.4)	68.25	(4.3)	38.10	(4.0)	33.45	(4.3)
The Year	70.04	(100.0)	51.53	(100.0)	36.51	(100.0)	32.67	(100.0)

The estimated average prices paid for Special Grade butterfat during 1945, '46, '47 and '48 do not include the Dominion Government Subsidy.

During 1945, '46 and up to April 30th, 1947, a subsidy of 10c per pound butterfat was in effect.

NOTE: The figures enclosed in brackets represent the monthly percentages of the cream receipts for the year.

TOTAL VALUE OF DAIRY PRODUCTS (By Years)

Year		Year	
1900	$ 546,476	1935	$14,252,500
1910	7,855,761	1940	19,532,344
1915	15,896,586	1945	34,588,305
1920	34,000,000	1946	36,900,000
1925	23,002,000	1947	46,811,000
1930	18,675,500	1948 Preliminary	56,117,000

TOTAL COWS FOR MILK PURPOSES

Year	Cows	Year	Cows
1901	46,101	1931	385,000
1906	101,235	1936	458,200
1911	147,687	1940	416,800
1916	277,324	1945	376,400
1921	432,838	1946	326,200
1926	436,500	1947	315,900
		1948	327,000

STATISTICAL DATA RELATING TO MILK CONTROL

Submitted by the Board of Public Utility Commissioners
(A. T. Neale, Administrator of Milk Control)

The tables which follow relate to milk and cream supplied and sold for fluid consumption in the areas of the Province controlled by the Board of Public Utility Commissioners during the year 1948.

TABLE 1.

PER CAPITA CONSUMPTION OF FLUID MILK, IN PINTS, MONTHLY FOR 1948
(To Include Cream Consumption Converted to Milk Equivalent.)

PINTS (PER DIEM)

Area	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary	.950	1.016	1.039	1.048	1.046	1.059	1.027	1.005	.948	.976	.974	.976
Camrose	.842	.855	.888	.859	.898	.865	.835	.824	.864	.869	.918	.902
Crow's Nest Pass	.443	.437	.478	.516	.515	.591	.488	.476	.490	.445	.470	.476
Edmonton	.974	1.043	1.062	1.058	1.054	1.026	1.026	.990	.952	1.065	1.090	1.079
Lethbridge	.993	.994	1.030	1.687	1.096	1.134	1.052	1.066	1.010	1.016	1.032	.991
Medicine Hat	.890	.890	.920	.925	.901	.919	.906	.890	.890	.886	.884	.890
Ponoka	1.100	1.306	1.378	1.361	1.397	1.506	1.379	1.341	1.341	1.368	1.493	1.476
Red Deer	1.062	1.168	1.213	1.216	1.311	1.206	1.226	1.270	1.268	1.242	1.250	1.242

TABLE 2

CONSUMPTION OF FLUID MILK MONTHLY, 1948—IN QUARTS

Area	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary	1,100,684	1,090,344	1,182,224	1,155,872	1,203,001	1,179,067	1,147,589	1,128,648	1,145,329	1,202,576	1,168,608	1,206,785
Camrose	39,294	38,097	42,161	41,371	45,217	41,739	40,182	39,045	39,770	42,850	43,648	45,443
Crow's Nest Pass	58,224	53,766	62,880	62,484	65,219	73,619	62,259	62,701	62,633	58,695	58,747	60,702
Edmonton	1,365,611	1,364,424	1,479,404	1,466,069	1,504,271	1,436,687	1,402,517	1,385,275	1,391,067	1,503,041	1,488,371	1,500,986
Lethbridge	185,333	172,601	194,421	193,960	200,195	201,587	198,042	199,594	203,319	205,627	200,690	202,597
Medicine Hat	140,812	134,313	149,840	145,786	150,054	150,176	149,552	147,987	149,669	152,946	147,893	152,796
Ponoka	17,824	19,017	20,940	20,725	21,144	22,976	21,057	20,695	20,581	20,944	21,678	21,158
Red Deer	66,801	57,802	64,422	60,341	68,290	62,290	63,308	64,006	64,448	67,858	65,409	67,858

TABLE 3

CONSUMPTION OF FLUID CREAM MONTHLY, 1948—IN QUARTS

Area	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary	107,821	110,487	123,014	119,149	119,374	113,512	127,097	123,905	113,051	119,460	118,368	122,301
Camrose	1,836	1,615	1,827	1,425	1,476	1,464	1,670	1,686	1,711	1,891	1,884	1,948
Crow's Nest Pass	34	53	316	335	268	347	220	—	—	—	—	—
Edmonton	126,726	126,985	139,085	120,540	127,015	112,972	128,403	125,902	122,753	133,682	133,738	140,092
Lethbridge	15,350	14,435	16,391	16,013	17,551	14,931	14,853	15,125	15,533	17,367	17,947	16,310
Medicine Hat	8,928	8,010	8,321	8,138	7,283	6,390	7,540	7,196	7,775	8,716	8,512	8,979
Ponoka	944	998	1,183	1,050	1,093	1,157	1,170	1,114	1,016	1,156	1,269	1,405
Red Deer	3,274	2,794	3,075	3,230	3,478	2,922	3,316	3,626	3,190	2,942	2,930	2,942

TABLE 4

FLUID MILK CONSUMPTION, 1944-1948—IN QUARTS

Area	1944	1945	1946	1947	1948
Calgary	14,883,161	14,718,119	15,138,343	14,437,081	13,910,727
Camrose		NO RECORD			498,817
Crow's Nest Pass		NO RECORD			741,929
Edmonton	16,585,994	17,046,833	18,515,522	17,575,803	17,287,723
Lethbridge	2,203,781	2,333,010	2,806,947	2,422,713	2,357,966
Medicine Hat		NO RECORD		1,776,904	1,771,824
Ponoka		NO RECORD			248,739
Red Deer	942,676	606,001	755,730	761,967	772,833
Totals	34,615,612	34,703,963	37,216,542	36,974,468	37,590,558

TABLE 5

FLUID CREAM CONSUMPTION, 1944-1948—IN QUARTS

Area	1944	1945	1946	1947	1948
Calgary	1,263,110	1,315,726	1,519,581	1,600,813	1,417,539
Camrose		NO RECORD			20,433
Crow's Nest Pass		NO RECORD			1,573
Edmonton	1,467,631	1,478,393	1,632,854	1,710,999	1,537,893
Lethbridge	157,789	159,958	184,753	208,730	191,806
Medicine Hat		NO RECORD		96,473	95,788
Ponoka		NO RECORD			13,555
Red Deer		NO RECORD			37,719
Totals in Qts.	2,888,530	2,954,077	3,337,188	3,617,015	3,316,306
Totals in B.F. Equivalent lbs.	820,484	759,458	837,013	1,401,535	995,161

TABLE 6

FLUID MILK PURCHASES BY DISTRIBUTING PLANTS, 1944-1948—IN POUNDS

Area	1944	1945	1946	1947	1948
Calgary	46,363,477	46,982,078	48,220,977	47,943,162	44,746,741
Camrose		NO RECORD			1,326,321
Crow's Nest Pass		NO RECORD			1,393,870
Edmonton	43,135,693	43,673,442	51,149,051	51,191,446	52,369,056
Lethbridge	*10,623,093	*9,534,137	‡6,724,565	‡7,016,653	‡6,624,628
Medicine Hat		NO RECORD		4,626,413	4,593,004
Ponoka		NO RECORD			699,388
Red Deer	4,311,049	3,563,992	4,319,322	4,061,350	3,195,454
Totals (lbs.)	104,433,312	103,753,649	110,413,915	114,839,024	114,948,462

*Includes Milk for Military Personnel. ‡City Milk Only.

TABLE 7

SUMMARY OF MILK AND CREAM PRODUCERS OPERATING ON DECEMBER 31st, 1948, UNDER BOARD OF PUBLIC UTILITY COMMISSIONERS' LICENSE

Area	Milk	Cream	Total
Bowden	1		1
Calgary	232	38	270
Camrose	7		7
Crow's Nest Pass	11		11
Edmonton	305	30	335
Lethbridge	34		34
Medicine Hat	38		38
Ponoka	4	1	5
Red Deer	22	8	30
Totals	654	77	731

TABLE 8

SUMMARY OF MILK AND CREAM DISTRIBUTORS OPERATING ON DECEMBER 31st, 1948, UNDER BOARD OF PUBLIC UTILITY COMMISSIONERS' LICENSE

Area	Milk	Cream	Total
Bowden	1		1
Calgary	5	3	8
Camrose	2		2
Crow's Nest Pass	1		1
Edmonton	8		8
Lethbridge	2		2
Medicine Hat	5		5
Ponoka	1		1
Red Deer	2		2
Totals	27	3	30

TABLE 9

MILK AND CREAM PRICES AS EFFECTIVE DECEMBER 31st, 1948

	MILK		CREAM			MILK PRODUCTS	
Area	To Producers Per 100 lbs. (3.5% B.F.) $	To Consumers Per Qt. c	10% Substandard Per Pint c	18% Table Per Pt. c	32-34% Whipping Per ½ Pt. c	Chocolate Milk Per Qt. c	Buttermilk Per Qt. c
Calgary	4.25	17	22	38	29	18	16
Camrose	3.78	15	20	35	27	17	14
Crow's N. Pass	4.87-5.45	21	—	—	—	—	—
Edmonton	4.25	17	22	38	29	18	16
Lethbridge	4.25	17	22	38	29	18	16
Medicine Hat	4.25	17	22	38	29	18	16
Ponoka	3.78	15	20	35	27	17	14
Red Deer	3.98	16	22	38	29	18	—

TABLE 10

COMPARISON OF PURCHASE AND RE-SALE PRICES OF MILK AND MILK PRODUCTS AS EFFECTIVE DECEMBER 31st, 1948

		PURCHASE PRICE		RETAIL SALE PRICES		
Province	City	Per 100 lbs. Basis 3.5% B.F. $	Milk Per Qt. c	Cream Substandard Per Pt. c	Buttermilk Per Qt. c	Chocolate Dairy Drink Per Qt. c
British Columbia	Vancouver	3.95	17	20	15	18
Alberta	Edmonton	4.25	17	22	16	18
Saskatchewan	Regina	4.05	17	20	16	18
Manitoba	Winnipeg	4.05	17	20	12	18

REPORT OF THE POULTRY BRANCH

(C. W. Traves, Poultry Commissioner)

GENERAL

As stated in the 1947 report the poultry industry finished that year on a note of extreme uncertainty. This uncertainty prevailed throughout the entire year of 1948. Not only was the industry uncertain as to whether or not the egg contracts with Britain would be terminated before completion but there were very grave doubts as to the possibilities of any contracts at all for 1949, and as the pullets produced during the 1948 hatching season would determine, to a major extent, the egg production for the first six months of 1949, the flock approval and hatching programme could not be carried out with any degree of certainty or confidence.

Reports received throughout the year regarding poultry production in other countries also were very conflicting. Denmark was not in any position, largely due to the unfavorable feed situation, to show any substantial increase in her egg and poultry meat shipments to Britain. However, long-term contracts on a fairly large scale were signed. The same pertained to Australia and South Africa, and towards the close of the year appeared to be true with some other European countries. It appears quite definite that the dollar and foreign exchange markets are the crux of the whole situation. Had Canada been in the Sterling Block instead of the Dollar Block there is not any doubt in the minds of those connected with the poultry industry that we could have had contracts on a long-term and a satisfactory financial basis with Britain.

Production costs continued the steady upward trend noticed with everything else. Although there was no shortage of supplemental feeds or animal proteins the prices of these and grains were considerably higher than for 1947. Although the understanding was that the egg contracts would be re-negotiated if deemed necessary on the feed ratio basis as was done during 1947 this did not materialize, and the renewed contracts at lower prices and a greatly reduced volume clearly indicated that the feed ratio was ignored entirely.

Great credit is due to the industry for its present position and outlook towards the future. Although there is bound to be some dissension under existing conditions there seems to be, at the close of the year, more of a spirit of optimism than pessimism prevailing. Producer groups, produce associations, hatcherymen, feed dealers and others directly or indirectly connected with the industry are sticking together and doing everything possible to make the best of existing conditions and planning for a better future. Although Alberta, due to its expanded war and post-war production and lack of large consuming centres when compared to most other provinces, is in a very vulnerable position there is practically no evidence that there will be any drastic reduction in the poultry industry.

EGG PRODUCTION

Due to the all-time high record chick production of 1947, the winter, spring and early summer egg production of 1948 enabled Alberta to make a record contribution of shell eggs, frozen egg powder and frozen egg melange to the British contracts. No other province in Canada showed an equal per-bird contribution. Due to the uncertainty of the future and extremely unfavourable weather conditions during a good part of the hatching season chick production for all of Canada showed a decrease of 22.61% from the 1947 record. However, Alberta, with a decrease of 15.92%, showed the smallest decrease of all provinces.

Due to the fact that road and transportation conditions made it impossible for many farmers to obtain their chicks at the approximate date desired there was an above normal carry-over of yearlings for a second-year egg production. This has meant that Alberta maintained a better than anticipated volume of deliveries to the Special Products Board for the latter part of the 1948 contract year.

The domestic demand for eggs continued very firm throughout the year. Increased industrial development, especially that taking place in the north country, has assisted greatly and gives promise of a very substantial outlet in that direction.

DRESSED AND LIVE POULTRY

The live poultry export situation does not hold very much interest for this province. Due to the heavy shipments of live poultry from British Columbia to the large consuming centres across the line there was some shipment of live poultry to British Columbia, but this had little effect on the local markets.

The high costs of other meats, coupled with a fairly short supply and decreased holdings of poultry, gave Alberta a favourable local market for live and dressed poultry, and in fact there were periods of short supply. This was particularly true with heavy chickens and turkeys, and towards the close of the year hatcheries were experiencing an unusually heavy demand for turkey poults and cockerel chicks of the heavier breeds. As long as the storage stocks of dressed poultry remain at or near the present low levels and the prices of other meats stay up, there should be a good market for dressed and live poultry in Alberta.

EXPORT MARKETS

Unless some steps are taken in the very near future to overcome the present Dollar-Sterling situation it would appear that a large portion of the splendid war and post-war effort of Canadian producers and marketing agencies that has built up such an enviable reputation, particularly for Canadian shell eggs, will be largely lost and that either Canada will have to find export markets other than Britain for her surplus eggs and poultry or we will have to curtail our poultry production.

Fortunately, Canadian eggs and dressed poultry are gradually receiving favourable recognition on other world markets, and

there is every indication that additional export markets are available if carefully cultivated and serviced, all of which is helping to maintain confidence regarding the future of the industry.

WHOLESALE POULTRY PREMISES

All wholesale poultry premises in Alberta operate under Dominion permit and registration and Provincial licensing. Administration of regulations pertaining to these stations comes under Dominion supervision. Wholesale poultry premises have shown a steady improvement in efficiency and classification during the past five years, with the result that the shell eggs and egg products shipped from Alberta are second to none in Canada. The following data supplied by the Dominion Poultry Officials show the progress made in station improvement.

Analysis of stations operating in Alberta under Dominion Registration and Provincial Licensing for period 1944-1948.

TOTAL NUMBER OF STATIONS OPERATING IN ALBERTA

Year	Fully Registered	Tentative Registration	Total Operating
1944	—	—	160
1945	—	—	188
1946	177	12	189
1947	168	17	185
1948	167	3	170

STATION RATINGS SHOWING PERCENTAGE OF THE WHOLE

Year	Out-standing	%	Good	%	Fair	%	Poor	%	Not Rated	%
1944	16	10	78	48	66	42	—	—	—	—
1945	18	10	81	43	58	31	28	15	3	1
1946	32	17	91	48	40	21	17	8	9	5
1947	42	23	82	45	38	20	13	7	10	5
1948	62	36	81	48	19	11	6	4	2	1

METHOD OF TEMPERATURE CONTROL USED IN STATIONS

Year	Mechanical Refrigeration	Ice Cooling	Basement	Water Cooling	None
1944	93 - 59%	55 - 36%	10 - 4%	2 - 1%	—
1945	122 - 65%	41 - 21%	12 - 7%	2 - 1%	11 - 6%
1946	127 - 70%	31 - 17%	12 - 7%	2 - 1%	8 - 4%
1947	138 - 78%	22 - 13%	10 - 6%	2 - 1%	3 - 2%
1948	143 - 85%	16 - 9.5%	8 - 5%	—	1 - .5%

TABLE SHOWING DIVISION OF STATIONS IN VARIOUS TYPES OF OWNERSHIP

Year	Co-operatives	Wholesalers	Privately Owned
1944	77 - 48%	51 - 32%	32 - 20%
1945	99 - 52%	34 - 19%	55 - 29%
1946	93 - 49%	56 - 30%	40 - 21%
1947	86 - 47%	54 - 29%	45 - 24%
1948	79 - 46%	59 - 35%	32 - 19%

This year both departments inaugurated a new policy in connection with wholesale premises. The province was divided into zones and the operators in each were called into a central point in their respective zones.

A programme covering marketing and production subjects was drawn up for the two series of meetings held this year, and the Dominion inspectors dealt with the marketing subjects and Provincial inspectors dealt with the production subjects. Attendance and participation in these meetings by the station operators was very gratifying, and it is hoped by continuing this policy that steady improvement in efficiency of service rendered and in the quality of the product being received will be shown. It is also hoped that during 1949 it will be possible to hold two or three large central meetings or conventions and that from 1950 on Provincial Poultry Conventions can be held with the station operators' section playing an important part.

CHICKEN APPROVAL AND BANDING POLICY

As stated previously, towards the end of 1947 there was considerable uncertainty regarding future egg contracts with Britain but, nevertheless, Alberta poultrymen had more flocks approved with an increased number of birds tested than ever before for the supply of commercial hatching eggs. As Alberta had never supplied her full requirements along this line it did not mean any surplus of hatching eggs for the 1948 chick season. This increase is shown in Table 1 below.

TABLE I

Year	Method of Testing	No. of Flocks	No. of Birds	% Reaction
1930-31	Tube Agglutination	148	18,608	20.2
1931-32	" "	232	31,177	12.9
1932-33	" "	188	26,381	8.6
1933-34	" "	205	33,295	7.3
1934-35	" "	645	104,858	11.2
1935-36	" "	615	94,536	5.5
1936-37	" "	815	136,228	5.5
1937-38	" "	677	108,908	4.8
1938-39	" "	534	92,355	4.51
1939-40	Whole Blood	437	80,927	5.1
1940-41	" "	412	91,868	2.6
1941-42	" "	510	120,198	2.12
1942-43	" "	460	120,841	0.35
1943-44	" "	664	165,903	0.716
1944-45	" "	694	198,877	0.736
1945-46	" "	632	186,992	0.798
1946-47	" "	792	248,666	0.526
1947-48	" "	862	276,716	0.645

NOTE: The above reaction is on the first test. Some provinces show a lower reaction, but these are on the final tests where over 2% reaction required a second and sometimes third and fourth re-tests.

Each year shows a steady increase in the number of R.O.P. Sired chicks being produced and sold in Alberta, and each year it is becoming increasingly difficult to maintain the quality of our approved flocks. Each year shows increased resentment by approved flock owners in the necessity of having to go to the extra expense of procuring R.O.P. males for their flocks when too high a percentage of these males are of indifferent to poor quality. The inspectors of this branch are unanimous in their opinion that the continued use of R.O.P. males in large volume is definitely lowering our average flock quality and that if we are to show the breeding progress that we were showing before the compulsory use of R.O.P. males became effective we must institute and supervise our own breeding programme. This should include approval of all R.O.P. flocks in Alberta as well.

TURKEY APPROVAL AND BANDING POLICY

There is a definite trend towards the larger turkey breeding flocks and the sale of turkey poults. Unfortunately, Alberta turkey breeders have not taken advantage of the hatching egg market available to them, with the result that large numbers of turkey hatching eggs and poults have been imported, many of them from sources that leave something to be desired from a quality standpoint.

The supply of poults was very much below the demand this year, with the result that those who were able to obtain commercial poults or who produced their own, experienced the most profitable turkey meat prices on record. This has given rise to an exceptionally early demand for 1949 poults.

HATCHERY APPROVAL REGULATIONS

These regulations are administered by the Dominion inspectors. As stated previously there was a reduction of 15.92% in chick sales for 1948 when compared with those of 1947. However, a considerable proportion of this reduction can be charged against the worst road and shipping conditions experienced for many years rather than to a reduction in the industry because of increasing production costs and a none too certain future.

Table II shows the development of hatcheries and chick sales since 1936.

TABLE II

Year	Egg Setting Capacity	% of 1936	Chicks Hatched	% of 1936
1936	924,300	——	1,028,881	——
1937	1,036,526	112.1	1,068,056	103.8
1938	1,033,906	111.9	1,171,082	113.8
1939	1,052,759	113.9	1,394,194	135.5
1940	1,203,368	130.2	1,538,597	149.7
1941	1,269,117	137.3	1,938,052	188.4
1942	1,407,280	151.2	2,631,468	255.8
1943	1,408,070	152.3	3,607,372	350.6
1944	2,102,434	223.1	5,476,476	532.3
1945	2,208,938	238.9	4,917,366	477.9
1946	2,445,750	264.6	5,711,423	555.1
1947	3,404,773	390.0	7,452,785	724.3
1948	3,638,704	393.7	6,265,620	608.9

The inspectors of this department service the flocks supplying the hatching eggs and the farmers who purchase the chicks and poults. As stated, they recommend that we institute and supervise a revised poultry breeding programme and they feel that maximum results can only be accomplished by Provincial administration of the Hatchery Approval Regulations as well as the Approval and Banding Policies.

TORONTO ROYAL WINTER FAIR

Each year the poultry exhibit to the Royal is encountering increased numbers and quality of opposition. However, the Alberta 1948 exhibit of chickens, turkeys and water fowl made the usual good showing and the following is a listing of awards taken.

ALBERTA WINNINGS
TORONTO ROYAL WINTER FAIR, 1948
POULTRY

	1st	2nd	3rd	Other Awards	Total
Poultry	2	3	2	—	7
Turkeys	10	8	3	6	27
Geese and Ducks	1	—	1	1	3
Dressed Poultry	1	1	1	2	5
Total	14	12	7	9	42

PROVINCIAL POULTRY PLANT

When poultry was discontinued at the University of Alberta during the middle twenties the Provincial Poultry Plant was established at Oliver. During 1927 the brooder, range and laying houses at the University were moved to the Poultry Plant. A 20'x120' laying house, barn, combination brooder and store house were built to provide additional accommodation.

The buildings moved from the University were not new by any means and the assortment of brooder and range houses moved out, gradually deteriorated until at the present time five brooder and three range houses are left and these are rapidly reaching the state where they will have to be replaced.

Four of the six laying houses moved were placed together to make two laying and breeding pens. Two were used separately. These buildings have been beyond repair for several years and are now badly in need of replacement.

New buildings added to the Poultry Plant since 1937 include 14 brooder houses, 12 range houses, a killing and wash room addition to the long laying house, and a combination work shop, storage room and implement shed. Experimental confinement rearing verandahs for turkeys have been added to two of the original laying houses. A demonstration laying house at the Edmonton Exhibition Grounds was moved to the Plant in 1941. An 18'x120' building was repaired and remodelled to make individual breeding pens.

From the time the University closed out their poultry farm until the establishment of their present facilities the Oliver Plant was used by the Faculty of Agriculture students for demonstration and practical class purposes. During that in-between period the Poultry Plant carried out special feeding and other experimental work in conjunction with the University poultry staff. When the present University poultry farm was established their foundation Single Comb White Leghorn and Bronze turkey stock was provided from the Poultry Plant. Co-operative work is still being carried out between the two plants.

A high standard of breeding and progeny test work with the Single Comb White Leghorns has been carried on and our flock continues to be one of the outstanding flocks for size of R.O.P. entry and results in Canada.

Table III illustrates these results.

TABLE III

R.O.P. 1947 - 1948 Entry——			
	Birds entered	483	
	Birds certified	428	88%
	Average production——223 eggs.		
	Average egg weight——25.2 oz.		
	Dead and culled——11.2%.		
	Progeny Test——		
	Males entered	8	
	Males passed	8	
	Females entered	51	
	Females passed	42	

NOTE: Practically all of the females entered under Progeny Test would have passed had it not been for the fact that we split some of our more desirable families for the University Foundation Stock and they withdrew their entry before the completion of the R.O.P. year. Ottawa had agreed to consider their entry in conjunction with the Plant entry.

A summarization of hatching and sales of Leghorn stock is shown in Table IV.

TABLE IV

Provincial Poultry Plant

Hatched——		
S.C.W.L.	R.O.P. Pedigree Chicks	12,476
	Custom (U. of A.)	5,929
	Hatchability: All Eggs—69%	
	Fertile—80%	
Sold——		
	R.O.P. Cockerel Chicks	3,200
	Pullet Chicks	1,800
	Hatching Eggs	5,784
	R.O.P. Banded Cockerels	657
	Pullets	2,301
	Turkeys hatched	1,183
	sold	747
	Hatchability: All Eggs—56%	
	Fertile—79%	
	Hatching Eggs Sold	1,550

As stated in previous reports we supply pullets to the Schools of Agriculture at Vermilion and Olds and pedigreed and foundation breeding stock to other R.O.P. breeders and to approved flock owners. When we consider that Alberta Leghorn Approved Flocks are headed by approximately 2,000 pedigreed males from the quality breeding stock being produced on the Poultry Plant the value of the Plant cannot be figured from the dollar and cents standpoint alone.

With the Bronze turkeys we have continued the experimental work in confinement rearing and the best type of porches to use. We believe that we have sufficient material available for a leaflet on this subject.

We also continued our work with the crossing and improving of strains of Broad Breasted and Standard Bronze Turkeys and are developing some outstanding families and blood lines. These should prove of value to our turkey breeders. As stated previously in this report 1948 proved to be an exceptionally profitable year for those who raised market and breeding turkeys. Due to the extra hatching required to prove our family lines we reared more turkeys than usual. Accurate records were kept and Table V gives a clear picture of the results obtained with the Bronze turkeys at the Provincial Poultry Plant for 1948.

TABLE V

Jan. 1st	Value of Breeders on hand—			
	84 hens at $10.00	$840.00		
	10 toms at $15.00	150.00		
			$ 990.00	
	Sold May 28th, 81 hens			
	9 toms		422.24	
	Depreciation			$ 567.76
Revenue—				
	Poults Hatched—1,183			
Jan. 1st	Breeders		$ 990.00	
	Hatching Eggs sold, 1,550 at 30c		465.00	
	Turkeys sold for meat—718		5,940.92	
	Turkeys sold for breeders—			
	15 hens at $10.50		157.50	
	13 toms at $18.00		234.00	
Dec. 31st	Breeders on hand—			
	89 hens at $10.50		934.50	
	23 toms at $18.00		414.00	
				$9,134.92
Expenditures—				
	Depreciation on breeders		$ 567.76	
	Hatching and brooding costs—			
	1,183 poults at 25c		395.75	
	20 sacks breeders' mash at $4.20		84.00	
	50 sacks turkey starter at $5.05		252.50	
	419 sacks developer mash at $4.25		1,780.75	
	545 bushels wheat at $1.92		1,046.40	
	962 bushels oats at 91c		875.42	
	47 sacks grit at $1.23		57.81	
	45 sacks oyster shell at $1.60		74.00	
	Drugs and miscellaneous		50.00	$5,184.39
	Labor Revenue ($4.60 per bird)			$3,950.53

As usual we had a large number of visitors to the Poultry Plant, mostly people interested in chickens and turkeys. They were shown about the premises by members of the staff, who described the buildings, equipment, feeding, management, range rotation, and answered questions on other poultry matters.

The splendid picnic grounds at the Plant were used not only

by agricultural groups but by commercial firms and also by many individual family groups.

Some people are inquiring as to the necessity for Poultry Plants at both the University and Oliver. As explained previously the Oliver plant was established at the time when the University closed their original plant and filled the gap and performed a very valuable service while no facilities were available at the University. The Oliver Plant is primarily for breeding and demonstration purposes, while the University Plant is primarily for research purposes. The two are working closely together and we have been asked to do additional work for the University Poultry Department during 1949.

REPORT OF AGRICULTURAL EXTENSION SERVICE

Director, Extension Service	R. M. Putnam
Supervisor of District Agriculturists	F. H. Newcombe
Supervisor, Home Economics Service	Mrs. V. G. Macdonald
Supervisor, Girls' Clubs	Miss M. K. Fraser
Nutrition Specialist	Miss B. J. Lewis
Home Designing Specialist	Miss C. Judson
Agricultural Engineer	E. B. Martin
Extension Editor	E. B. Swindlehurst
Supervisor, Agricultural Information	R. E. English

GENERAL

There was no let-up in the demand for nor the work of the Extension Service during 1948. The agricultural economy was released from additional wartime controls, as a result of which producers enjoyed higher prices for certain commodities. Under conditions of average production and higher prices, no serious problems were encountered during the year, and the Extension Service was enabled to proceed with its primary work of agricultural improvement.

Since extension work is a dynamic service, it is forever changing. During the last few years there have been slow but certain changes taking place. In its earlier days, extension workers dealt with immediate problems such as weed control, live stock feeding and management, soil drifting, and so on. Although work of this kind will always be necessary, there is a growing trend by extension workers and farmers themselves to evade these problems by adopting a system of farming in which they are less likely to arise. This same principle is being adopted to some extent by extension workers in home economics, who believe that certain problems can be evaded if the job of homemaking is approached on a broad front.

The Extension Service believes that while it can do a great deal to assist people to solve their problems, its real purpose is to teach them to solve these problems themselves, and thereby achieve the best and most lasting results.

Through the District Agriculturists the largest amount of extension work continues to be done. In addition to general extension work in agriculture, the District Agriculturists supervise a number of projects in junior club work, and because of the Department's association with the Dominion Department of Labour, the District Agriculturists are still carrying on certain functions in the field of farm labour.

The Home Economics Division of the Extension Service has become more firmly established, and was expanded this year by the appointment of a Home Designing Specialist and three more District Home Economists. The home economist staff is continuously studying problems of the work and seeking new ways and methods of meeting them. The appointment of a Home Designing Specialist and the association of the Department with the Prairie Rural Housing Committee has permitted the Exten-

sion Service to give valuable assistance to farm people who are building new homes, remodelling old homes, or who had other problems relating to interior decoration, home furnishings, home equipment, etc. As a result of domestic workers for farm homes becoming available from Displaced Persons Camps in Europe the Dominion-Provincial Farm Labour Service expanded its activities to include the placement of these girls. The District Home Economists were assigned the task of inspecting the homes of the applicants and of assisting to place the girls when they arrived.

It is gratifying to report fewer staff changes in 1948. Miss Caroline Judson was appointed as Home Designing Specialist in the Home Economics Division. Mr. E. B. Martin resigned on December 31st as Extension Agricultural Engineer. The field staff was increased by the opening of one additional District Agriculturist office and the appointment of two Assistant District Agriculturists, and three new District Home Economist offices were established. At the end of the year there were thirty-five District Agriculturist offices, with a staff of thirty-five District Agriculturists, two Assistant District Agriculturists, and twelve District Home Economists. Details of the personnel changes will be found in the appropriate divisions of this report.

Two somewhat important developments occurred in the Extension Branch during the year. The first of these was the transfer of rural housing from the Department of Economic Affairs to the Department of Agriculture. The Alberta Rural Housing Committee was reorganized to include Mr. F. H. Newcombe, Mrs. V. Macdonald and Professor Hardy, Dean of Applied Science, University of Alberta. Because of this transfer the Department became more closely associated with the Prairie Rural Housing Committee, of which Mr. Newcombe became chairman in October. The work of this committee and details of a farm home competition will be found elsewhere in this report.

The second development was the holding of two regional District Agriculturist Conferences, at Athabasca and Wetaskiwin, to discuss and work out farming programs for the gray wooded and black soils respectively. These conferences were valuable means of permitting the workers within the two areas to exchange ideas and improve their knowledge of the basic farming principles of the areas.

The Extension Service has many contacts, both within and without Government departments. During the performance of its work it receives much assistance and help from other Departments of the Government, the University of Alberta, various Departments of the Dominion Government, and from public and commercial organizations as well as certain individuals. To each and all of these organizations and individuals, the Extension Service desires to express its sincere appreciation and thanks for the assistance which has been so freely given.

In the following sections of this report details of the work of the Extension Service will be found.

STATISTICS

The compilation of certain statistical tables and reports was carried on as in previous years. Some help was provided to the

Dominion Bureau of Statistics in arriving at production data and other information. Early in the year the "Estimated Gross Value of Production" was published, and from time to time releases on specific topics were made.

PUBLICATIONS

The demand for publications seems to be increasing. There appears to be a greater number of publications requested by the public, while officials and extension workers seem to be utilizing printed material more and more. Despite a larger appropriation of publications, money provided does not meet the increasing demand.

During 1948 the number of bulletins, leaflets, etc., distributed is estimated at 275,940.

The following publications were printed or reprinted during the year:

Leaflet 32—Respiratory Diseases of Poultry (reprint).
Bulletin 53—Curing Pork on the Farm (revised).
Bulletin 57—The Salad Bowl (reprint).
Leaflet 61—Preparing Poultry on the Farm for Marketing (reprint).
Circular 63—Hay and Pasture Crops for Alberta (revised).
Bulletin 72—Preserve by Freezing (revised).
Bulletin 74—Lunch Boxes and Hot School Lunches (reprint).
Bulletin 75—Vegetables Make the Home Plate (reprint).
Bulletin 77—Care of Package Bees in Alberta (reprint).
Circular 78—Production of Field Peas in Alberta (revised).
Circular 79—Grass and Legume Seed Crops in Alberta (revised).
Leaflet 80—Homemade Electric Pig Brooder (reprint).
Bulletin 83—Weed Control with 2, 4-D (new).
Bulletin 84—Bang's Disease (new).
The Future Forests of Alberta (purchased).
Farm Houses (purchased).
Canada's Sheep and Wool Industry (purchased).
Recommended Horticultural Varieties and Zonation Map for Alberta (revised).
Special Leaflets—Acreage and Production of Principal Grain Crops by Census Divisions 1921-1947 (revised); Care of Wool at Shearing Time and Sheep Hints (new).
Plans—Hog Farrowing Crate (new).

AGRICULTURAL SOCIETIES AND FAIRS

The following fairs were held in 1948:

Class "A" Fairs—Calgary, Edmonton.

Class "B" Fairs—Camrose, Lethbridge, Lloydminster, Red Deer, Vegreville, Vermilion.

Class "C" Fairs—Benalto, Didsbury, Goose Creek, Falher, Lamont, Lousana, Medicine Hat, Olds, Priddis, St. Paul, Westlock, Wildwood, Willingdon.

Interest in fairs remained high in 1948. The established fairs enjoyed a large attendance in 1948, but there was little change in the number of exhibits. The new Class "C" Fairs were well supported and should develop into larger events.

Several Class "B" Fairs embarked on a development program during the year utilizing therefor the financial assistance offered by the Dominion Department of Agriculture. A few of the Class "C" Fairs contemplate improvements to their grounds and buildings, as well.

The basis of payment of grants to Class "B" Fairs was changed from a straight grant to a grant based on the amount

paid out in prizes. Grants to both Class "B" and "C" Fairs are now made on a percentage basis.

While most of the agricultural societies restrict their activities to the holding of a fair only, several societies are providing a useful service to their communities by holding live stock sales, meetings, short courses and other events. Early in 1948 the Department held a meeting with representatives of the Class "B" Fairs when certain changes in the Act were suggested. It is expected that these suggestions will be acted upon soon.

FARM LABOUR

The most important development under the terms of the Dominion-Provincial Farm Labour agreement during 1948 was the introduction and placement on Alberta farms of about 800 displaced persons. Other activities were continued on much the same basis as in previous years.

A shortage of experienced farm help continued in 1948. While Polish veterans and displaced persons contributed to easing the labour shortage, they were inexperienced in Western farming methods. Wages were somewhat higher than in 1947, but despite this inducement farmers were short-handed. More and more farmers, especially in the sugar beet area, are providing housing accommodation for married men in the hope that this action will induce them to stay in agriculture.

The most important activities of the Dominion-Provincial Farm Labour Service are outlined below.

(1) *Displaced Persons.* About 800 displaced persons were brought to Alberta by the Dominion-Provincial Farm Labour Service during the year. Included in this number were 669 souls (557 workers) for the sugar beet industry, 110 single male workers, 123 domestic workers and 9 married couples. The sugar beet workers arrived later than desired, which caused some placement problems, but all were finally located. The displaced persons were generally satisfactory workers. They came to Alberta on the understanding that they would serve for one year in agriculture at going wages but not less than $45.00 per month for men and $35.00 per month for domestics, plus board and lodging.

(2) *Polish Veterans.* The first group of Polish veterans, which arrived in Alberta December 1st, 1946, completed their two years' service in agriculture on the first of December. It is estimated that of this group about 35% or 40% will remain in agriculture. The remaining 280 Polish veterans will complete their period of farm employment about June 1st, 1949.

(3) *Western Farm Workers.* As in previous years, Alberta contributed men to assist with haying and harvesting in Ontario. About 437 men went to Ontario in June and returned at the end of August.

(4) *B.C. Fruit Pickers.* Floods in the Fraser Valley in 1948 disrupted the movement of pickers to the area. However, in spite of these conditions 247 women and girls from Alberta joined the movement to British Columbia. The recruiting for this movement was done by the National Employment Service.

(5) *Eastern Harvesters.* A larger number of Eastern harvest-

ers was needed in the fall of 1948 than in the previous year. Crops were somewhat better and local labour seemed scarce. The total number which came to the Province was 967. Of this number, 622 came direct from Ontario and Quebec, while the remainder moved westward from Manitoba and Saskatchewan upon completion of harvesting in these Provinces. The basis of the movement remained similar to that of 1947.

(6) *Movement of Harvesting Equipment.* The movement of combines to the United States for harvesting declined greatly in 1948. After there appeared to be little possibility of any movement, a limited number of machines was requested. Alberta's share was 104 combines, for which permits were issued. The problem of issuing permits was complicated by the number of applications submitted. From reports received it appears that Canadian operators did not do as well as in previous years.

(7) In addition to the foregoing specific activities, the Dominion-Provincial Farm Labour Service gave general assistance and guidance in securing and placing labour. According to the records available, District Agriculturists placed about 3,500 workers of all kinds during the year. Investigation or inspection of Polish veterans and displaced persons totalled 1,406.

The Dominion-Provincial Farm Labour Agreement continues to be a useful and workable policy for joint action by a Dominion and Provincial authority on a matter of mutual concern. The fact that numerous agencies are engaged in immigration complicated the work of the Dominion-Provincial Farm Labour Service because it was not in possession of information regarding the total number of immigrants brought to the Province for agriculture.

DISTRICT AGRICULTURIST SERVICE

Another year of service has made its contribution to the present and future stability of our agricultural industry. The trends indicated in last year's report could be repeated in this one. The conviction is growing that some of the methods of mass approach which have been practised in the past leave something to be desired in definite results and that personal contact with a smaller number of persons may, over a long term, be productive of more definite and enduring improvement. Thus, the policy of complete farm planning accompanied by cost accounting is growing in popularity. Less changes in staff personnel have occurred than for several years past.

O. G. Bratvold of the Red Deer office resigned from the service to be succeeded by J. L. Eaglesham, formerly Supervisor of Crop Protection at Headquarters.

G. R. Sterling left the District Agriculturist Service to join the Field Crops Branch, and he was followed at Lacombe by L. W. Rasmusson, who first carried on the work at Calgary during the illness of Mr. C. G. Anderson.

H. D. Smith, Assistant at Vegreville, resigned to take up farming at Red Deer.

L. D. Williams was appointed to the newly re-opened office at Sedgewick after a period as Assistant at Camrose and other points.

W. A. Ross was appointed Assistant at Athabasca.

Peter Jamieson returned from leave of absence after completing degree studies at the University of Alberta and resumed his duties at Claresholm.

L. Gareau also returned from leave of absence for post-graduate study to take charge of the newly-opened office at Bonnyville.

As at December 31st, 1948, therefore, offices are maintained and manned as follows:

Athabasca—G. L. Godel
Assistant, W. A. Ross
Berwyn—H. H. Michael
Bonnyville—L. Gareau
Brooks—I. Lapp
Calgary—C. G. Anderson
Camrose—W. A. Moisey
Cardston—D. L. Steed
Claresholm—P. Jamieson
Drumheller—N. F. Bell
Edmonton—B. J. Whitbread
Falher—P. Gibeau
Grande Prairie—J. T. Stranatka
Lacombe—L. W. Rasmusson
Lethbridge—S. S. Graham
Assistant J. R. Gylander
Medicine Hat—J. L. Anderson
Morinville—J. M. Fontaine
Olds—H. McPhail
Ponoka—W. C. Gordone
Red Deer—J. L. Eaglesham
Ryley—N. A. Chomik
Sangudo—L. H. Peacock
Sedgewick—L. D. Williams
Smoky Lake—M. D. Shemeluck
Spirit River—G. W. Shewchuk
Stettler—R. D. Price
Strathmore—R. J. Milligan
St. Paul—M. Chevrette
Thorsby—T. Kilduff
Vegreville—W. N. Pidruchney
Vermilion—E. H. Buckingham
Wainwright—J. S. Robblee
Westlock—J. A. Goode
Wetaskiwin—W. C. Proctor
Willingdon—F. Magera
Youngstown—K. H. Walker

The office at Thorsby with all furniture and records was destroyed by fire on December 9th and temporary quarters have been arranged.

Offices have been provided in new Provincial Buildings at Bonnyville, Cardston and Vegreville, and in new Municipal Buildings at Camrose and Wainwright, and the Grande Prairie office has been moved to more spacious quarters in another building.

FARM MANAGEMENT

The need for more systematic planning of farm programmes is becoming increasingly recognized by farm operators. Proper balance between departments of the farm is indicated. Filing of income tax returns emphasizes the need for careful records. Attention of District Agriculturists is increasing from year to year with respect to this aspect of extension, though as yet no large-scale projects have been attempted.

Working with individuals, however, complete plans have been prepared for 23 farms. These include all phases of the farm business, i.e., cropping sequence, tillage practice, live stock programme, re-arrangement of fields, layout of shelter belts, repair and construction of buildings, essential machinery and estimate of revenue. Plans covering one or more departments of the farm have been prepared in 366 cases, cost accounts have been set up for 19 and father-and-son agreements prepared for 5.

Farm management discussions were presented at 189 meetings, while 3,588 persons were otherwise assisted with information or advice on this subject.

SOIL CONSERVATION

Possibly no phase of agriculture is the subject of more comment in the press and among agriculturists than soil conservation. In keeping with this trend, District Agriculturists have given attention to this line of extension. In 12 districts this attention has taken the form of projects or campaigns to encourage: Back sloping and seeding of roadsides, adding fibre to soil, filling and seeding gullies, forest conservation, seeding of forage crops, and management of solonetz and other soils. 405 farmers participated in the projects.

One hundred and five demonstrations or demonstration fields were given or laid down and these were seen by at least 2,420 farm people. Subjects demonstrated included alkali treatment, seeding gullies, rotations, trash cover, terracing, drainage, tillage practice and implements, use of crop residue, reclamation of wind-eroded soil. In one district Junior Club members prepared thematic displays.

Eighteen thousand nine hundred farmers attended 459 meetings at which soil conservation was discussed. In addition, information or advice was given to 2,255 persons.

WEED CONTROL

Seed Cleaning

District Agriculturists made 160 visits for inspection of custom grain cleaners. Information and assistance was given with a view to establishment of 19 community cleaners, while 45 farmers were assisted with establishment or operation of farm cleaners.

In one district a Short Course was organized to train farmers in grain cleaner operation.

Demonstrations

The introduction of selective herbicides for weed control has given the farmer another very powerful weapon in the war on weeds. It has also provided a subject for many enquiries and this Service has endeavored to give guidance with a view to increasing effectiveness and reducing disappointment. Eighty-six demonstrations have been arranged, at which the use of chemicals, tillage and competitive crops were presented to 4,215 farmers.

Demonstration Fields

One hundred and thirty-eight fields were laid down to demonstrate weed control practices, including effect of fertilizers, crop rotation, forage, competitive crops, etc. One hundred and six meetings and field days were held in connection with these fields, which were seen by an estimated 3,670 farmers.

General

District Agriculturists estimate that about 2,200 machines are now used for the application of herbicides for weed control. In addition to other activities, 3,742 persons have been assisted with information or advice on weed control.

CROP IMPROVEMENT—Grain

Demonstration Plots

Varietal and other demonstration plots are a visual means of pointing out desirable practices. This service was instrumental in laying down 67 of these plots. Forty Field Days attended by

3,415 farmers were held in connection with these plots, and it is estimated that in addition they were seen by 2,100 others.

Seed Distribution

Though most seed exchange details are now handled by representatives of elevator companies, the District Agriculturists had a hand in the organization for distribution of 48,780 bushels of registered seed and 229,637 bushels of commercial seed grade.

At the request of the Plant Products Division, Production Services, 209 fields, exclusive of Junior Club Plots, were inspected for registration or contest.

Four thousand and eighty-six other farmers received information or advice respecting completion of forms for registration, suitable varieties, production of registered and certified seed, supplies of uncommon varieties and preparation of samples for exhibition. Twenty-eight articles were written for the press on similar subjects.

CROP IMPROVEMENT—Forage

One hundred and five fields were laid down to demonstrate forage varieties and possibilities. Eleven Field Days were held on these plots, and it is estimated they were seen by 1,300 farmers.

In one district in the south a campaign is under way to introduce Ladak alfalfa on every farm for pasture improvement. To date only seven farmers are participating.

Well over 4,000 farmers received advice and information on forage crops, including varieties, mixtures, sources of seed, preparation of soil, methods of seeding, inoculation and harvesting of fodder and seed.

Under the provisions of the Forage Crop Seed Distribution Policy, the District Agriculturists personally, or through agents appointed by them, were responsible for the distribution of 549,168 pounds of seed. Through the Forage Crop Improvement Policy they distributed 5,546 pounds of seed to 61 applicants.

PLANT PESTS AND DISEASES

Demonstrations in a total of 21 and attended by 938 persons were conducted or organized by the District Agriculturists. Control was demonstrated of such pests as wireworms, grasshoppers, saw flies, aphids, currant worms and others of ornamental shrubs and gardens.

One hundred and sixty-four specimens were forwarded for identification on behalf of farmers and 1,847 persons were otherwise assisted with information and advice. Several articles were prepared for newspapers.

LIVE STOCK IMPROVEMENT

One district is continuing a project of cattle improvement by introduction of good sires and culling of female stock. Some suitable sires are now becoming available in this district as a result. In the main, effort is concentrated on individual contact, with encouragement toward higher quality breeding stock. In this effort the following placements of breeding stock are reported.

	Under Department Policy		Privately	
Horses			8 males	
Cattle	787 males		413 males	450 females
Sheep	28 males		64 males	376 females
Swine	135 males	22 females	229 males	432 females
Poultry			500 males	

During the year District Agriculturists gave 25 demonstrations on type and judging, castrating, dehorning, branding and other phases of live stock work. These were attended by 1,031 farmers. Three hundred and thirty-four meetings with an attendance of 12,075 were addressed on live stock topics.

Assistance has been given to 80 farmers in their selection comprising 923 animals, and to 32 poultry men in culling 3,700 birds.

Registration of pure bred animals is increasing year by year and 549 breeders have been assisted and advised as to procedure.

Many other individual problems of nutrition and general husbandry are brought to the country offices. This year they total well over 3,000 on which information and advice have been given.

Live Stock Marketing

While marketing assistance has not been a major project, District Agriculturists report that they have assisted with the organization and conduct of 27 public sales involving 9,849 animals. It is estimated that these sales have earned or saved for contributors $79,125.00 in excess of what they would have received through usual channels. In addition, advice with respect to live stock marketing programmes has been given to over 400 farmers.

Live Stock Pests and Diseases

Calfhood vaccination is becoming more popular but is restricted in some areas by lack of veterinarians. Through organization by District Agriculturists 5,915 calves were vaccinated for 595 farmers. Seventeen demonstrations on warble, sheep ked, barn fly, and Bang's control were seen by 238 persons; 158 specimens were forwarded to laboratories and 1,000 farmers were otherwise assisted or informed with respect to pests and diseases. An epidemic in one district resulted in organization for vaccination of 2,000 calves for blackleg.

DAIRYING

Assistance was given to dairy cost surveys. In some districts quality of produce and sanitation was stressed at meetings and Field Days and quality cream competitions were held.

Nine demonstrations were arranged with attendance of 611 people. Subjects dealt with included dairy type, care of milk and cream, sterilization of utensils, and the loafing barn for dairy cows.

District Agriculturists have influenced 50 farmers to begin or continue cow testing and have assisted 60 producers to cull and select dairy breeding stock. Information and advice have been given to 596 farmers on dairy husbandry, rations, and care of the product.

JUNIOR CLUBS AND ACTIVITIES

Activities with farm girls and boys have always been an important phase of District Agriculturist work. During the past year supervision was given to 326 Clubs, with a total membership of 5,442. Personal contact has been established and assistance and information given to most of these members on their

home farms. In addition, District Agriculturists arranged and/or conducted 172 demonstrations in various phases of farm husbandry and club activities and these were attended by 6,277 members and parents. A total of 877 Club meetings were held with an aggregate attendance of 19,135, which included many parents.

Social events such as concerts, dances, swimming and picnic parties and banquets have been encouraged with their opportunities for cultivation of the social graces. Tours of Club members have been organized to such points of education and interest as the University Farm, Experimental Stations, packing plants, feed and flour mills, farms, and dairies, as well as local district trips.

A continuing trend is evident toward providing some form of training for young farm people who have passed Junior Club age. In Athabasca district a community organization has been set up for study of local and national problems of a social and economic nature. Social and recreational affairs are also conducted. Nine meetings have been held, with an aggregate attendance of 352.

Thirteen Short Courses and Rallies especially planned to appeal to youth have been arranged and these drew 728 young people. In addition, District Agriculturists were active in conducting six Farm Camps, with attendance 420 at Class "B" Fairs.

AGRICULTURAL SERVICE BOARDS

These must be considered as Agricultural Extension bodies with aims and objectives very similar to those of this Service. The relationship of the District Agriculturist is that of technical advisor and to him must fall much of the planning and guidance.

His will be the most important voice in laying down cropping programmes and tillage practices for the 136 farms now under supervision by these Boards.

Other activities of the Board in which he has a leading part comprise reclamation of eroded land, herbicides in weed control, drainage, re-grassing, tree planting programmes, animal pest sprays, Better Farming Competitions, Save-the-Soil Campaigns, winter meetings and exhibit booths.

FARMSTEADS

Requests for service indicate a growing interest in farmstead beautification. District Agriculturists have planned 107 farmsteads and 162 shelterbelts. More than 200 farmers have been assisted in procuring 97,000 trees and 1,247 others have been given information and advice with respect to horticulture and home surroundings.

BEEKEEPING

Twenty-six meetings and demonstrations were arranged which were attended by 1,041 beekeepers. Information, advice or assistance in matters pertaining to bees were given to 705 others.

AGRICULTURAL FAIRS

District Agriculturists acted as judges at 24 Fairs and otherwise assisted 32 Fairs. In addition, information on preparation of exhibits and exhibiting was given to 569 persons.

AGRICULTURAL SHORT COURSES AND MEETINGS

Short Courses and Agricultural Meetings of a general nature totalled 192 with an aggregate attendance of 12,621.

AGRICULTURAL ENGINEERING

District Agriculturists were instrumental in the organization of 86 Short Courses, Field Days, or meetings for discussion, adjustment and demonstration of farm machinery at which the aggregate attendance was 7,051.

For discussion of Rural Electrification problems five events were held and these were attended by 514. Farmers in a total of 838 were otherwise assisted with information and advice with respect to engineering problems. The new rural electrification areas were assisted in organization.

FARM LABOUR

While this phase of the work requires somewhat less attention than in war years, the following was accomplished:

Necessary visits re Polish Veterans and D.P.'s	551
Harvesters placed locally or sent East	2740
General Farm Help placed	1502
Directed to other industries	371

ASSISTANCE TO DISTRICT HOME ECONOMISTS

District Agriculturists report having spent 164 days and having driven 15,639 miles assisting District Home Economists in their work.

PUBLICITY AND INFORMATION

Weekly newspapers are increasingly used as a means of publicizing timely information projects and current agricultural events. For these purposes articles were prepared for 1,136 issues.

OTHER ACTIVITIES

It might be said that these are "too numerous to mention". The following, however, indicates some of these activities: Assistance to Chambers of Commerce and similar bodies, irrigation encouragement, exchange of feed supplies, V.L.A. agricultural committees, addresses to non-agricultural bodies including schools, assistance to P.F.R.A., organization and encouragement of Farm Forum listening groups, sampling soil and water for analysis, farm safety demonstrations, radio broadcasts, advice to prospective settlers re land, etc.

STATISTICS OF DISTRICT AGRICULTURIST ACTIVITIES

	1946	1947	1948
Number of Meetings	1,392	1,608	2,036
Attendance at Meetings	81,830	80,536	101,248
Farm Visits	17,999	18,616	19,835
Office Interviews	38,819	38,800	44,453
Telephone Calls	28,738	31,124	36,461
Letters Written	33,320	32,351	39,067
Bulletins, etc., Distributed	110,619	83,924	109,496

PEACE RIVER FARM WATER SUPPLY ASSISTANCE POLICY

Inspection of dugouts for subsidy under the provisions of this Policy are made by the District Agriculturists in the Peace River area only. In addition, these four District Agriculturists encourage protection of dugouts from tramping by stock, planting of trees, and seeding of waste piles to grass. The following indicates the number of dugouts excavated in each year since the inception of the Policy.

1945 — 720
1946 — 512
1947 — 189
1948 — 175

HOME ECONOMICS EXTENSION SERVICE

This might well be the year which marks the transition from the pioneer stage of this service to that of a proven and more permanent phase of development. The plan of organization for this service was started in 1939-40 and has been gradually developed with the increased need and demand for this type of work. In these last few years the importance of the homemaker and her influence on the economic affairs of the nation has been recognized—her problems and actions are no longer relegated to the women's page, but have become front page news. At no time has sound and widespread education of women been more important. It is imperative that information be provided which will guide and assist the homemaker in using her resources to build a healthy, happy family and a home which is a satisfying place in which to live. The homemaker who does this, and who contributes to a happy community life, is doing much to determine the outlook of our country. Until we achieve a good life at home we cannot ever expect to exert our full influence among other nations. This is the opportunity and challenge to today's homemaker and to those of us who may assist and advise with homemaking problems.

This year we have been fortunate in retaining, with one exception, our now more experienced staff. There are now twelve permanent District Home Economist offices. Three new offices were opened in June at Brooks, Wetaskiwin and Edmonton, and five new District Home Economists were appointed as follows:

Miss Margaret Smith—Red Deer, appointed March 1st to replace Miss B. Anderson, who resigned in January.

Miss Lucille Rioux—St. Paul; this office was closed from November, 1947, to June 1st, 1948.

Miss Ruth Murray—Westlock; replaced Miss Ruth Whaley, who was transferred to open the Edmonton office.

Miss Norma Smith—Wetaskiwin.

Miss Lillian Wasiuta—Brooks.

On December 31st the following offices were occupied by District Home Economists:

Camrose, Miss Edith Armstrong.
Grande Prairie, Miss Cecilia Connelly.

Calgary, Miss Norma J. Hogg.
Vegreville, Miss Grace Horbay.
Lethbridge, Miss LaPrile Low.
Stettler, Miss Priscilla Mewha.
Westlock, Miss Ruth Murray.
St. Paul, Miss Lucille Rioux.
Red Deer, Miss Margaret Smith.
Wetaskiwin, Miss Norma Smith.
Brooks, Miss Lillian Wasiuta.
Edmonton, Miss Ruth Whaley.

In addition, the appointment on June 14th of a Home Designing Specialist, Miss Caroline Judson, marked an important step in the plan of development for this Service and in meeting the need for advice and up-to-date information on the building and remodelling of rural homes. The Home Designing Specialist was assigned the task of providing information and service respecting:

(a) New home planning and construction.
(b) Home remodelling.
(c) Interior decoration.
(d) Furnishings and equipment

During the summer months the Home Economists at the Schools of Agriculture, Miss Christine McIntyre, Miss Gwen Caverhill, Miss Doris Elford, Miss Mary Hawrelak and Miss Helen Moseson, were assigned to districts to assist the District Home Economists in carrying out their summer programmes. This proved a more satisfactory method of making fullest use of the broken time which these Home Economists have for field work, considering that they return to the Schools for summer short courses.

Two undergraduate students in Home Economics were appointed for the four summer months, one to assist in Girls' Club Work and the other to assist the District Home Economist at Grande Prairie. This pre-training of possible future District Home Economists has proved valuable.

The District Home Economists continue to report that they cannot meet the demand for homemakers' clinics, girls' clubs and individual assistance in their districts. Each District Home Economist serves three District Agriculturist areas (one serves four). The five District Home Economists who this fall were provided with cars report that less time is now spent in planning and arranging schedules; that time previously wasted in waiting for trains and buses can now be effectively used and that more work can be done in less time. Certainly, more effective work can be carried on when a car is available, as study groups requiring more supervision, and projects which deal with basic needs but which require a series of meetings, can now be organized and adequately directed. Also, girls' and women's clubs are organized and schools served which were formerly impossible to reach.

With the increased cost of living this year the Home Economists have placed special emphasis on programmes to assist the homemaker in getting the most for her dollar and in developing abilities and skills enabling her more efficiently to perform the wide variety of homemaking tasks with which she is faced.

Homemakers' clinics still continue as the most popular and effective method for assisting and instructing homemakers.

Short courses held for two or three days in conjunction with the agricultural short courses are gaining in popularity and are proving an excellent means of publicizing our service and of meeting women not organized in clubs.

To keep in closer touch with all the women's clubs of their districts the Home Economists prepared monthly newsletters containing timely suggestions which are read at their club meetings. From comments received, these newsletters are very much appreciated and the women have come to expect them as part of our regular services. The District Home Economists also contribute regular columns to their local newspaper and this service has resulted in considerably increasing the number of letters and calls for information on homemaking problems.

This year is the first time the Home Economics Service has been responsible for carrying out a part of the Dominion-Provincial Farm Labour Agreement, by which farm domestics from Displaced Persons' Camps in Europe were placed on Alberta farms. The District Home Economists have been responsible for investigating the farm applications, and for visiting the displaced persons following placement in these homes. When necessary transfers are arranged and suggestions offered which may assist these young women in learning our language and our ways and in establishing themselves as responsible citizens. The Supervisor has acted on the Women's Sub-Committee of the Dominion-Provincial Farm Labour Committee.

Despite the inclement weather and impassible roads during April and May, when most meetings had to be cancelled, the number of demonstrations given this year has increased, as well as the demand for our other services.

For the coming year the District Home Economists are being encouraged to improve their technique in extension methods, so as to have as fundamental an approach as possible. They will study more deeply the specific problems and needs of homemakers in the various areas of their district and aim not only meet to the needs felt by the homemakers themselves, but also attempt to awaken an awareness among the homemakers of their needs and of ways by which they may provide a better home life on their farm.

Publications:—The following new leaflets were published:

Tips on Food Preparation.

Use your Peas and Beans.

Christmas Recipes.

Feeding the Pre-School Child.

Facts and Figures for the Overweight.

Lazy Susan Cupboard.

New Ways of Mending.

Several other leaflets and bulletins were revised to meet changing conditions.

GIRLS' CLUB WORK

The interest in the home economics projects provided for girls' clubs in Alberta is increasing. In 1948 projects were completed by 110 clubs with a total membership of 1,340. Not only is the number of clubs increasing, but we are also finding that these clubs are becoming in the nature of an institution in many districts. They are reorganized regularly and as older girls leave, younger ones are taken in to fill their places. The interest of the girls in this work is shown by the fact that fifteen leaders or assistant leaders this year are former club girls.

PROJECTS

In 1948 projects were offered in clothing, foods, gardening, home decorating and etiquette. The food project, "Meals Up-to-Date", has been revised and there is an increased interest in it. The gardening projects have also been rewritten to stress the food section. This revision allows club members taking these projects to enter the national food judging competitions. Thirty-seven of the clubs carried on one of the gardening projects. This year all clubs enrolling are expected to carry the etiquette project along with their regular project. This has proven very beneficial to the club members. It is hoped this year to increase the interest in the home decorating projects with the assistance of the Home Designing Specialist.

AWARDS

This year 98 Efficiency Winners attended club weeks at the Schools of Agriculture at Olds and Vermilion, and 51 clubs paid the expenses of sending the second-place girl, as well.

The Alberta Wheat Pool, who sponsored the gardening projects, awarded 37 prizes for the best garden plots in each club and presented seven clubs with awards for obtaining the best standing in each Home Economist's district.

SCHOLARSHIPS

Four scholarships were again awarded to club girls at the Club Weeks held at the Schools of Agriculture. These were donated by the Wheat Board Money's Trust Fund to the girls with the most outstanding records in club work and apply on a winter's course at a School of Agriculture. The winners were:

Doreen Walker, Markerville.
Jessie Polichuk, Ardley.
Louise Ellett, Morinville.
Germaine Chauvet, Legal.

The Alberta Wheat Pool scholarship to the value of $150.00 to a member of a garden club enrolling in first year home economics at the University of Alberta was awarded to Miss Lorraine Shatz of Bow Island.

TRIPS

A delegation representing the Montana 4-H Clubs attended club week at the School of Agriculture at Olds in July. Two girls, two boys and the Assistant State 4-H Club Leader made up the party. In return a delegation from Alberta was invited to the Montana State 4-H Club Congress. Again this year the club members were selected on the basis of their age, achieve-

ment in club work, personality and ability. The Alberta girls attending were:

Betty Brown, Nanton.
Germaine Dusseault, Vimy.

The delegates brought back many new ideas and greater enthusiasm to make club work in Alberta a success.

JUDGING COMPETITIONS

Teams in foods and clothing were sent from Alberta to represent the Province in the National Judging Competitions held in Toronto in November.

Sixteen teams of two girls attended the Provincial Judging Competitions held at the Olds School of Agriculture in October. Each team represented clubs in a Home Economist's district. From this group the Provincial teams were selected.

These teams were:

Foods—Joyce Beaton, Marilyn Beaton, Bow Island.
Clothing—Audrey Baker, Audrey Carlson, Ardley.

The foods team was placed second and the clothing team third in the National Competitions.

These competitions are arousing enthusiasm among club members and are also stirring up interest in general in club work.

LEADERS' COURSES

Two leaders' courses were held, one in April prior to the start of the gardening projects and one in July for other club leaders. Both of these were held at the Olds School of Agriculture.

Of the 37 garden club leaders, only 19 were able to attend due to the flood conditions in late April. Forty-three girls' club leaders attended the course in July. According to reports from the District Home Economists these leaders' courses are proving very helpful. The leaders are better able to carry out the projects properly and confidence and enthusiasm is developed which makes for much better club work.

Five leaders were presented with awards for five years or more of service in this work.

OTHER ACTIVITIES

The Alberta Girls' Club uniforms are proving very popular. The girls make these uniforms themselves. They work at club weeks, competitions, and other get-togethers, as well as for out-of-the-Province trips.

Twenty tours and field days were held by clubs. Visits were made to the Schools of Agriculture, Experimental Farms and local farms, and tours of garden plots undertaken when judging was being done.

Farm Girls' Camps were held in conjunction with the Red Deer, Vegreville, Vermilion and Camrose fairs. Instruction at these camps is provided by this Department. The attendance at these camps increased considerably over last year, with most of them having capacity enrolment.

In 1948 radio talks numbering 19 were prepared for Farm and Home Forum and C.B.C. Club Broadcasts.

In order to keep in close contact with all clubs a monthly Club News Letter was prepared and sent out to all members. This

included instructions and suggestions regarding the projects and news items sent in by the various clubs.

This year for the first time, joint Boys' and Girls' Club Weeks were held at the Schools of Agriculture. These proved quite satisfactory and should be successful when a few details are worked out. The problem of accommodation for both groups may develop shortly with the increased number of clubs. The assistance given by the Alberta Wheat Pool field men at these short courses is very much appreciated.

During the summer months Miss Sheila Forrest, who is an undergraduate in home economics, assisted with Girls' Club work. This proved to be a very good arrangement, especially since she had been a club member herself. As there are a number of former club members taking home economics at University who are desirous of going into extension work it would seem to be a good practice to have them do this work during their undergraduate year. It is very useful to have this assistance in club work as the majority of achievement days, short courses, field days and camps are held during that time, and the assistance is much more valuable if the girl has had some training in club work.

Supervision of the Girls' Clubs is carried out by each Home Economist in her own district under the Provincial outline. They know where the clubs would be most successful; they give close direction to the leaders; and they are able to continue work with these young people in the district after they are out of club work.

The Girls' Club programme is designed to benefit those young people who have no opportunity of obtaining home economics training in schools. The aim is to improve standards and develop desirable ideals in homemaking and to encourage interest in community activities.

With an increase in the number of District Home Economists has come an increase in the number of clubs. The clubs are most useful in outlying and isolated places and where the Home Economists are provided with cars they are able to serve these districts. The average membership in clubs tends to be lower this year, however. This is due to two factors:

1. There are fewer girls of club age in more outlying districts but they are the girls who need our assistance, as they have not the help available from other sources.

2. Much of the work in the Girls' Club projects requires individual help by the leader, so one leader can handle only a limited number of girls. We find that twelve is a very satisfactory number for one leader, although some clubs are larger.

In the coming year we hope to be able to do some work with girls over club age. There have been several requests for assistance of this sort. Many of these girls have carried the projects we have outlined for clubs and are now keeping house. They are interested in having training in some advanced work that will help them with their homemaking problems.

NUTRITION

The nutrition programme for 1948 has continued to stress the School Lunch Programme and Nutrition Study Groups. A special effort is being made to correlate nutrition education in the school, the nutrition projects carried on by Girls' Clubs, and adult nutrition education.

THE SCHOOL LUNCH PROGRAMME

The approach to the School Lunch Programme this year has been through a series of letters offering suggestions for the school lunch and means of correlating nutrition education with the regular school programme. These letters are prepared by the Nutrition Specialist and sent by the Home Economists to teachers in their districts. The first letter announced the series which was offered to all teachers on request to their District Home Economists.

Through these letters it is hoped to stimulate interest and action in improving the school lunch, and organizing hot lunch programmes. Just how successful this effort will be remains to be seen. One District Home Economist sent out 100 letters, received 70 replies and about 30 of these asked for help in organizing school lunch programmes. Another Home Economist sent out 397 letters and had only 15 replies. However, she is giving concentrated attention to these 15 schools. A real need is evident in some of these, and it is possible that results may be quite far reaching.

It is encouraging to hear from one Home Economist that she has received requests from new consolidated schools in her district for advice and assistance in establishing school cafeterias. These large schools offer an ideal opportunity for improving health and providing nutrition education through the school lunch. Unfortunately, the majority of those built previous to last year have had no facilities for the service of a hot lunch. The schools more recently planned seem to be making such provision.

Again this year the Nutrition Specialist was asked to conduct nutrition classes at the course in Constructive Medicine given for rural teachers by the Edmonton Rural Health District. The teachers who attended this course are bringing nutrition education into their school programmes and also acting as study group leaders in their communities.

ASSISTANCE TO SCHOOL DORMITORIES

The short course for school dormitory supervisors and cooks had to be shortened this year to three days, due to the fact that the only dates available began before the end of the school term. While 13 dormitories were represented at the course as against 10 last year, there were several other supervisors who indicated that they would have attended had the course been held a week later. We had one dormitory supervisor from Saskatchewan this year. The total attendance was 19.

The course this year stressed sanitation in food handling. We are grateful to Dr. Leslie C. Alan, Medical Officer of Health, Didsbury, for the very splendid series of illustrated lectures on this topic. We also appreciate the co-operation of the Red Deer School Division in making it possible for us to have the services

of their chef for a demonstration in meat cutting and meat preparation.

To assist in developing the educational programme and in planning the dormitory food service the Survey Team from the Nutrition Division, Ottawa, was asked to conduct a survey in one of the school dormitories. After conference with officials from the Department of Education, the Red Deer Composite High School Dormitory was selected for this survey. With the co-operation of the Red Deer School Division, the Red Deer Health Unit and the dormitory staff, arrangements were made and the preliminary diet records obtained. The complete survey, combining dietary records, physical examinations and biochemical analysis was carried out on 99 students. The results indicate the best nourished group of adolescents yet studied in Canada by these methods.

Throughout the year assistance is given to school dormitories by means of correspondence and personal visits.

FOOD AND NUTRITION PROJECTS FOR GIRLS' CLUBS

Report of this work is given by the Girls' Club Supervisor. This is one phase of nutrition work which can be most far reaching. These teen-age girls are learning to see the relationship of food to health at a period when it is of utmost importance to their personal development. By learning to select and prepare food for themselves and their families these girls are paving the way for a higher nutritional status in homes of the future.

NUTRITION STUDY GROUPS

One Home Economist states: "Indications are that wherever the study of nutrition is introduced, it is met with interest, but that there is hesitation on the part of most groups choosing it." This statement is true for all districts, but we are pleased to report that more and more groups of women are selecting our Nutrition Study Course. Requests have been received for several three-day courses for discussion group leaders, and reports indicate that the groups are following up this work. The Wetaskiwin "Nutrition Workshop" organized last winter proved so popular that a repeat course was requested this fall. This has been arranged for by the District Home Economist, and attendance has included representatives from several new groups.

One of our chief obstacles to effective nutrition work is, as for all phases of our home economics programme, the fact that those who need our services the most do not get out to our meetings. The community nutrition programmes initiated through Nutrition Study Groups help to some extent, but we still need to find other ways of contacting these people, particularly mothers of small children who find it impossible to get away from home. More homes visiting to observe the families in their practices, attitudes, skills and limitations will help greatly in planning programmes. Now that some of the Home Economists have cars it is hoped that it will be possible to plan a nutrition programme for the coming year which will bring more service to the homemaker in her home.

HOME DESIGNING

The work of the Home Designing Specialist began in June, 1948, with the "Better Farm House Competition" sponsored by the Central Mortgage and Housing Competition" sponsored by the Extension Service of the Department of Agriculture.

This competition, in the form of a questionnaire, sought to bring out original ideas of the farm women on farm home planning and home equipment. The questions, both statistical and explanatory types, covered every phase and requirement of a convenient farm home. The eagerness with which the rural groups entered this competition is proof of their intent and resolve to improve farm home standards. The valuable information gained by summarizing this contest will aid farm housing specialists and research councils to design farm homes to suit the needs of rural people. The contest served a twofold purpose, it gave an excellent graphic picture of what farm people wanted in their homes and it developed an increasing interest among farm people themselves to improve their homes to suit the purpose they are needed for.

The judging of the competition, held in October, was carried out by four judges with members of the staff acting in an advisory capacity. The judges represented the Central Mortgage and Housing Corporation, the Alberta Women's Institute, the United Farm Women of Alberta, and the Prairie Rural Research Council.

The winners were chosen October 9th, and later this was announced to the press. Arrangements were made for details of this contest to be broadcast over C.B.C. News Round-Up.

A complete summary of the best material contained in these winning questionnaires was the next step taken by the Home Designing Specialist to make this valuable information useful to housing specialists and research councils. The Central Mortgage and Housing Corporation will use this Alberta Summary to complete their booklet of a National Summary. This National Summary will contain information of interest to all competition participants, regardless of where they live in Canada.

The increased demand for authentic, unbiased information on house construction, planning and remodelling by rural people has been partially satisfied by the new planning bulletin "Farm Homes, 10 Preliminary Plans," prepared by the Prairie Rural Housing Committee. This booklet contains floor plans and exterior perspectives of ten well-planned farm homes. The complete blueprints for these plans are available from the Home Designing Specialist. To date, approximately 4,500 copies of the bulletin have been distributed, and 60 requests for blueprints have been received. This is further proof that rural housing has reached a peak, after many years of delay due to depression, war and the inflationary cost of building. The booklet and the completeness of the blueprints have been received in very good favour. To quote, "At last someone has realized the need for house plans to suit farm requirements." By 37 office interviews and 15 home visits and written information the Home Designing Specialist assisted prospective home owners to chose a house plan that would best suit their needs and family requirements. In addition, this topic was discussed at 17 meetings during the year.

Research on new types of labour-saving home equipment has

been carried on. Propane gas for cooking and heating is becoming important and all available information of this utility is being gathered.

Many homes are preparing for rural electrification and a demand for information on good electrical equipment, washing machines, irons, vacuum cleaners and frigidaires has been sought and supplied. Information on home plumbing, sanitation and sewage systems and the installation of kitchen sinks and bathroom facilities in many homes has also been furnished.

The revision and detailed planning of rough floor plans submitted by rural home builders was also part of this year's work.

By many varied methods the Home Designing Specialist hopes to solve the present and future problems of home planning and interior decoration. The methods will include:

1. Radio talks covering phases of home planning.
2. Lectures and demonstrations.
3. Home visits and office interviews.
4. Films and slides.
5. Short courses in home planning.
6. Home study courses.

Part of this year's work has been devoted to preparing a Home Study Course, to be used by women's groups or community groups. The aim of this course is to place vital information and sources of additional material in the hands and minds of all who have an interest in the improvement of housing. This course will include:

1. Introduction—a brief resume of the needs of a well planned house
   —how to draw up a master plan that will allow for building and improvement over a period of years
   —building standards
2. Plan layout—how to plan to suit your needs
3. Kitchen and utility rooms
4. Basement planning—heating systems
5. Furniture and arrangement
6. Window treatments
7. Color in the home
8. Floor and wall finishes
9. How to remodel your home

It is hoped these methods will fill the great need for practical and theoretical information, so that prospective rural home builders and remodellers may plan and build comfortable homes to suit the many and varied needs of farm life.

SUMMARY OF ACTIVITIES OF WOMEN'S EXTENSION

	1943	1944	1945	1946	1947	1948
No. of Demonstrations	461	557	990	1,140	1,095	1,263
Attendance	14,454	19,317	34,338	39,900	37,125	43,101
Average Attendance	31.4	34.6	34.7	35	34.7	34.1
Fields Days and Short Courses, etc.	33	57	129	83	54	62
Judging at Fairs, Conventions	9	20	23	25	19	50
Radio Talks	10	28	21	38	37	51
Publications distributed	45,105	62,000	68,400	78,080	68,910	87,240
Letters requesting Information	1,855	1,786	6,663	8,788	7,617	16,807
Home Visits	267	621	911	1,021	998	1,389
Girls' Clubs	85	85	87	93	90	110
Office Interviews	—	—	—	827	922	982
'Phone Calls for Information	—	-	—	1,646	2,189	2,277

PRAIRIE RURAL HOUSING COMMITTEE

Effective this year funds voted in support of the work of this Committee were transferred to this Department for administration and disbursement.

The Committee set up in 1947, is composed of representatives of each of the three Prairie Governments and Central Mortgage and Housing Corporation. It's purpose is to conduct research into problems pertaining to the construction of rural homes. It was believed that this research was justified by the need for reliable information from an unbiased source, which information was not then available.

In its first year the Committee decided on seven research projects and these were allocated to the three Universities in accordance with facilities and personnel available. These projects were pursued throughout 1947 and 1948.

Project 1—House Planning and Design.

This may be considered as a major project and it has been conducted by the School of Architecture, University of Manitoba under direction of Professor John Russell. Sufficient progress was made to warrant publication of an interim report in 1948. This took the form of a bulletin of 10 plans for farm homes of which 6,000 were purchased for distribution in this Province. The interest of farm people as reflected in requests for the bulletin appears to justify the work done on this project.

It is anticipated that a final bulletin will be issued at a later date.

Project 2—Materials and Construction.

Work on this project is designed to determine heat insulation and vapor permeability of various materials including building papers, suitability of rammed earth for house construction and cinder concrete studies. Research is still in progress at the University of Saskatchewan.

Project 3—Water and Sanitary Facilities.

Research in this project has been conducted at the University of Alberta under direction of Dean R. M. Hardy. It has included collation of existing information, study of septic tanks and other sewage systems with respect to soil types and other factors, and treatment of farm water supplies as to softeners, filters, etc. Work is continuing and will result in a publication of results, possibly during 1949.

Project 4—Planning of Farm Kitchens.

Conducted at the University of Manitoba this project has been closely linked with Project 1. A booklet will be issued in due course.

Project 5—Heating the Farm Home.

Research has been under the direction of Dr. N. B. Hutcheon at the University of Saskatchewan. It concerns itself with heating principles and systems and with fuels. Results will be published in a booklet now in the printer's hands.

Project 6—Community Centre Planning.

Research included collation of existing information and expansion into new suggestions for this form of Community Recreation Centre. Results of this research conducted at the Uni-

versity of Manitoba are now ready for publication in booklet form.

Project 7—Remodelling Farm Homes.

Information in this field is expected to meet with popular response. Research is being conducted at the University of Manitoba with all possible dispatch, but it is necessarily slow. It is hoped that results may issue in 1949.

AGRICULTURAL ENGINEERING

Since a rather complete report of agricultural engineering extension work was contained in the 1947 annual report, the report for this year will deal with the year's programme only. The demands upon the Extension Agricultural Engineer increased considerably, and in some cases requests for service had to be refused because of lack of time.

In the early part of the year, a series of rural electrification schools was conducted at five points in the Province. These were two-day schools sponsored by a local organization and conducted by the Department, with the valuable assistance of staff members from Canadian Utilities Limited and the Calgary Power Company. The chief purpose of the schools was to give the farm users of electricity a better understanding and appreciation of the use of electrical power on their farms. The courses were given at Ponoka, Vermilion, Willingdon, Stettler and Acme. About 850 farm people attended one or both sessions. Two districts which had schools have asked for a second one in 1949.

The introduction of chemical weed control in farming practices raised many questions about equipment used for the application of chemicals and correct operation of this equipment. The Extension Agricultural Engineer and Mr. Wm. Lobay, Field Crops Branch, co-operated to organize and conduct a series of weed spraying and dusting equipment field days. Twelve such meetings were successfully carried out between May 28th and July 10th. Arrangements were made in each case to have a variety of equipment on hand for demonstration. Mr. Lobay dealt with the topic of chemical weed control in general, and E. B. Martin discussed the choice and operation of equipment for the job. These field days proved popular in most areas, and a total of about 1,600 farmers attended.

During the past few years tillage field days have been a popular item on the summer programme of most of the District Agriculturists. Due to the delayed spring and field work, considerable difficulty was encountered in satisfactorily arranging the tillage field days. Over sixty such field days were organized, but only fifty were actually held. Rain and the retarded spring accounted for a number of cancellations. About 2,900 people attended the fifty meetings. The one-way disc was, as in former years, the tillage implement which appears to provoke the most interest. The instructor spent considerable time discussing the problem of tillage practices in general as related to crop production, soil conservation and weed control, etc.

Five one-way disc tillage competitions were planned during the early summer, but only three were finally held. The one-way disc tillage competition is designed along the lines of the once-familiar plowing match, but using one-way discs in the place of

moldboard plows. General rules and regulations for such competitions are discussed and drawn up by the Alberta Agricultural Engineering Committee. A uniform score card was also agreed upon. The three competitions held this summer proved very popular. Between 500 and 600 people attended the competition at Viking, while the Three Hills and Morrin events drew 300 and 350 respectively. Following the competitions, the instructors went over the one-way disc in detail, outlining the correct adjustments and operation. It was found necessary to have two qualified instructors at the competitions. The tillage competitions can serve a useful purpose, and judging by this year's events, such competitions should be held in the future. The field days and competitions were conducted by the following men: B. T. Stephanson, Department of Agricultural Engineering, University of Alberta; F. F. Parkinson, Olds School of Agriculture; S. C. Acheson, Vermilion School of Agriculture, and E. B. Martin.

A plowing match is becoming an annual event in the Lacombe area. This year there were 17 entries, and 350 people were on hand to watch the competitions and acclaim the winners.

Another series of machinery short courses conducted in 1948 dealt with harvesting and harvesting equipment. An average of 48 farmers attended the nine harvesting courses. Much of the programme time was devoted to the combine.

The Agricultural Engineer attended the Rural Young People's Schools held at Athabasca and Morinville. Lectures and instruction were given on tillage, harvesting and haying machinery, tractors, farm safety, rural electrification, farm buildings and home modernization.

Eleven other miscellaneous meetings and short courses were attended and talks delivered covering rural electrification, dairy barns, farm power, farm machinery and farm buildings. About 950 persons were the recipients of these talks.

Five radio talks were prepared and presented over CKUA during the year. Titles of the talks were: "Switch to Better Living" (rural electrification), "Loafing Barns for Dairy Cattle," "Handling Grain the Easy Way," "Planning Your Farm Buildings," "Electric Motors on the Farm."

Twenty-five items were prepared for the A.L.C. and Agricultural Notes. Correspondence was heavier than last year, with the majority of the questions being asked about rural electrification, farm buildings and water systems.

During the year considerable material was collected for the proposed bulletin on farm barns to be prepared jointly with R. P. Dixon, Dairy Herd Improvement Supervisor.

With the coming of the combine harvester to the farms, the problem arose of providing a quantity of straw at the buildings. This problem appeared at its worst in 1948 when the late spring found many farmers with their feed supplies exhausted and the fields and pastures still covered by feet of snow. For two weeks in September the engineer travelled in southern and central Alberta making a study of the various methods and machines used to save straw. A report on this survey will be published at a later date.

RADIO AND PUBLICITY

While direct contact by means of meetings and personal visits is of primary importance in extension work, the use of radio and press serves as a valuable supplement. In recognition of this fact, the Agricultural Extension Service carries on both a radio and a press service.

Every Monday, Wednesday and Friday, the Alberta Farm and Home Forum is heard from radio stations CKUA and CJCJ. Co-operating in these broadcasts are the Alberta Department of Agriculture and the Faculty of Agriculture, University of Alberta. Their purpose is to acquaint listeners with research men, extension workers and others, who with the farmer and his family are striving for a better agricultural Alberta through efficient farm practices and comfortable farm homes.

Each programme consists of a short talk by a specialist in the subject under discussion, followed by farm and home notes prepared and presented by the Agricultural Extension Service. During 1948, 156 talks and discussions were heard, of which 84 were given by the members of the Department of Agriculture staff. Regular features of this broadcast are the Homemakers' Chats heard on the second and last Mondays of each month, and the Junior Club of the Air on the first Monday.

Circulars and bulletins continue popular and provide a valuable method of extension teaching. There is a growing tendency to bring these publications down to earth so that their contents may be read and digested with a saving of time and effort. Some work has been done in this direction, but the field offers wide scope. Few farmers have either the time or inclination to study material of a technical nature and the work required to provide information in easily understood language more than pays for itself in reduced reading effort and increased attractiveness.

An indication of the interest in agriculture displayed by our country editors and their desire to acquaint their readers with anything that might help in the work of farm and home is the extensive use made of the press notes issued by the Agricultural Extension Service. These notes are distributed weekly to country newspapers throughout the Province and to farm periodicals across the Dominion. Timely items dealing with farming and homemaking are provided, and the co-operation of editors in making this information available to our readers is appreciated.

In addition to the weekly farm notes, special articles for press use are prepared from time to time. Towards the end of 1947, the editor of an Alberta farm implement journal suggested that a series of articles of an agricultural nature would be welcomed by his readers. In response to this request, monthly articles were prepared by members of the various Departmental branches and submitted for publication.

Sources of information used in items and articles from this office are many and varied. In addition to recognition of the excellent co-operation by members of the Department's technical staff, we must express commendation of the work of some 200 correspondents in various parts of the Province who supply seasonal material for compilation of our crop reports. These reports of agricultural conditions, issued every two weeks from May to September, are based almost entirely on questionnaires completed by these correspondents.

AGRICULTURAL INFORMATION

Under the direction of Mr. R. E. English, Supervisor of Agricultural Information, the publication "Agricultural Information" was issued thirty-three times during the year. This publication is published mainly for the information of technical workers in the Department, but it is sent to a selected group of professional workers elsewhere, as well. The following are the titles of "Agricultural Information" issued during the year:

1. Interesting Observations on Soil Conservation.
2. Long-Range Agricultural Policy.
3. Ladino Clover in Wisconsin.
4. On Farm Management.
5. More Pigs with Alfalfa Meal.
6. The Scope of the Film in Agriculture.
7. Recent Development with Respect to Grazing Leases on Crown Lands.
8. Better Land Use. An International Problem.
9. Report on United States Agricultural Experiment Stations, 1947. (First Instalment)
10. Report on United States Agricultural Experiment Stations, 1947. (Second Instalment)
11. Report on United States Agricultural Experiment Stations, 1947. (Third Instalment)
12. Report on United States Agricultural Experiment Stations, 1947. (Concluding Instalment)
13. Swine Improvement Through Breeding.
14. Items for the Beekeeper.
15. "The Coming Squeeze in Agriculture." How Could It Be Alleviated.
16. Farm Business Agreements in Southwestern Ontario.
17. The Way to Higher Farm Incomes.
18. The Rothamsted Experimental Station, Herefordshire, Eng.
19. Some Results Reported by the Rothamsted Experiment Station, 1939-1946.
20. Bilateral Trade Arrangements of the United Kingdom. (First Instalment)
21. Bilateral Trade Arrangements of the United Kingdom. (Second Instalment)
22. Good Work Methods Important in Farm Operation.
23. (A) Efficient Farming Pays Off. (B) Farm Lease Agreements for Beginning Farmers.
24. Some Results Reported by the Rothamsted Experimental Station.
25. What Size Farm.
26. Chemurgy in Canada.
27. Twenty Years of Farm Records.
28. Breeding Yearling Heifers.
29. Alberta Beekeepers' Association. Report of the 15th Annual Convention held October 26 and 27. (First Instalment)
30. Alberta Beekeepers' Association. Report of the 15th Annual Convention held October 26 and 27. (Second Instalment)
31. Alberta Beekeepers' Association. Report of the 15th Annual Convention held October 26 and 27. (Third Instalment)
32. What Is a Conservation Farm Plan?
33. Farming and Agricultural Education in Holland.

REPORT OF THE VETERINARY SERVICES BRANCH, 1948

E. E. BALLANTYNE, V.S., D.V.M. - - - —Director.
J. G. O'DONOGHUE, V.S., D.V.M. - - - —Extension Veterinarian.
G. S. WILTON, V.S., D.V.M. - - - - - - - —Veterinary Pathologist.
C. H. BIGLAND, V.S., D.V.M., D.V.P.H. —Veterinary Pathologist.

Due to the increasing amount of work handled by the Veterinary Services Branch, additions to the staff became necessary. On July 19, 1948, Dr. J. G. O'Donoghue commenced duties as Extension Veterinarian to conduct investigations of reported disease outbreaks. Another important phase of his work is lecturing in Veterinary Science to the students in Agriculture and Pharmacy at the University of Alberta, and to the students at the Olds and Vermilion Schools of Agriculture. Dr. O'Donoghue operates the Mink and Fox Distemper Vaccine Bank, as well as assisting in the field work and supervision of the Bang's Disease and Mastitis Control Programme for the Edmonton Milk Shed.

Dr. C. H. Bigland commenced duties on September 1, 1948, as Veterinary Pathologist on poultry diseases, thus making Alberta the only province other than Ontario to give such specialized service to the poultry industry. The organization of this Branch in Alberta is a co-ordinated effort and prevents duplication of services. This leads to greater efficiency and economy.

VETERINARY STUDENTS

Thirty-six students from Alberta are attending the Ontario Veterinary College. In the interests of the live stock industry, the Department of Agriculture financially assists each of these students with a $200.00 grant annually on successful completion of the examinations. Four Albertans graduated during 1948. Three established practices in Alberta, namely, at High River, Milk River and Calgary. The fourth graduate went to New York State.

Ten of these veterinary students are to graduate in 1949. Several have intimated their intentions of establishing practices in strategic live stock areas in the Province.

Mention should be made here, too, that the Alberta Veterinary Medical Association is assisting the live stock industry by bringing in outside veterinarians. One has been placed in Vegreville and another at Bonnyville. Several others have applied for admission to Alberta. Within a short time, veterinary services should be available to a large percentage of the Alberta live stock men.

EXTENSION

(1) Lectures

At the University of Alberta, one lecture per week for both fall and spring terms was given to the first-year agricultural students, third-year agricultural students, and to second-year pharmacy students. At the Olds and Vermilion Schools of Agriculture, the course consists of a series of six lectures and three laboratory periods to the agricultural students. These lectures consist of some physiology and anatomy of the domestic animals, animal sanitation, disease control, and description of some of the more common diseases.

Besides the above lectures, a great many talks on disease prevention and veterinary subjects were given at various meetings, conventions, etc., as follows: Dairy field days at Andrew, Barrhead, Lacombe and Olds; general field days at Iddesleigh, Sedalia, Square Deal, Red Deer Lake and Turner Valley; fur breeders' field days at Faust, Joussard, Slave Lake and Wildwood; short courses at Olds, Wetaskiwin, Brooks, Medicine Hat, Foremost and Hanna; organizations—Canadian Feed Manufacturers (Western Division), Provincial Fur Breeders' Association, Provincial Sheep Breeders' Association, Provincial Swine Breeders' Association, Alberta Veterinary Medical Association, Provincial Live Fox and Mink Show, Wetaskiwin Kiwanis Club, Vermilion Board of Trade, Linden Cheese Factory Annual Meeting, Alberta Dairymen's Association, University of Alberta Feeders' Day, Sanitary Inspectors' Refresher Course, Junior Farmers' Short Course at University of Alberta, and St. John Ambulance Cadets. Meetings were addressed at Whitemud Creek School, Otaskawan School, North Edmonton Hall and East Edmonton Hall on the Bang's Disease and Mastitis Control Programme for the Edmonton Milk Shed, which will be discussed later.

Over 3,500 people were addressed on the control of Bang's Disease for the purpose of stimulating more interest in the control of this disease.

(2) Investigations and Service Trips

A total of 91 investigational and service trips was made by this Branch during 1948 as follows:

Fur Ranches	21
Cattle	39
Sheep	10
Horses	3
Swine	10
Poultry	8
	91

Many of these trips were incurred supervising the health of Government of Alberta herds. The herds of the University of Alberta, and the Olds and Vermilion Schools of Agriculture were periodically tested for Brucellosis (Bang's Disease) and all calves vaccinated. The herd at the Vermilion School of Agriculture, not being under Federal Supervision for T.B., was tested for this disease. Considerable work was done with the Department of Health herds, such as vaccination of calves, blood testing, T.B. testing and supervision of mastitis control. A large number of bulls handled by the Live Stock Branch were immunized against hemorrhagic septicemia.

Reports of disease investigations will be made under the different species of animals.

(3) Correspondence

Inquiries for advice regarding disease problems are received practically every day from live stock owners in areas not yet served by a veterinarian. When practical, it is advised that a sick animal or bird be forwarded to the Veterinary Laboratory for a diagnosis.

(4) Bulletins

A bulletin entitled "Bang's Disease" was issued for the information of the live stock men. Sections of the University of Alberta bulletins dealing with sheep, swine and dairy cattle diseases were revised.

(5) Radio

Radio talks were given on mastitis, poultry diseases and the prevention of other common animal diseases.

POULTRY DISEASES

The greater portion of the work of the Poultry Pathology Laboratory is devoted to ante-mortem and bacteriological examination of poultry specimens submitted by Veterinarians, Poultry Inspectors, Feed Manufacturers, Poultry Service Departments, and Poultrymen.

The following tables give a brief resume of the variety of specimens submitted and the conditions diagnosed at this laboratory during 1948:

POULTRY SPECIMENS, 1948

	Turkeys		Eggs	Chickens		Portions		Miscellaneous Feed			Pheasants	
	Live	Dead		Live	Dead	Turkeys	Chickens	Live	Dead		Live	Dead
January	4	4	2	29	11	1	3	1	1	1	—	—
February	—	1	—	19	10	—	5	—	—	—	—	1
March	—	3	—	41	53	—	4	—	—	2	—	2
April	10	39	5	55	104	1	5	—	—	8	—	—
May	15	91	—	83	105	—	1	—	1	5	—	—
June	35	80	—	80	58	—	—	—	—	13	—	—
July	13	13	—	33	23	2	2	—	1	—	—	3
August	4	2	—	45	11	—	3	—	1	—	—	—
September	4	1	—	63	18	2	1	—	—	—	—	—
October	—	13	—	34	19	1	5	—	1	1	—	—
November	1	3	—	32	31	1	6	—	2	—	—	—
December	4	14	—	61	47	12	10	1	2	1	—	—
Total	90	264	7	575	490	20	45	2	9	31	—	6

SPECIMEN TABLE

Species	Live	Dead	Portions	Total
Chicken	575	490	45	1,110
Turkey	90	264	20	374
Feed Samples	—	—	31	31
Egg Samples	—	—	7	7
Pheasant	—	6	—	6
Canary	1	3	—	4
Ducks	—	3	—	3
Canada Goose	—	1	—	1
Pelican	—	1	—	1
Partridge	—	1	—	1
Prairie Chicken	—	1	—	1
Total	666	770	103	1,539

POULTRY DISEASE TABLE

	Chicken	Turkey	Miscellaneous
Blackhead	—	7	—
Bronchitis	22	2	—
Chilling and Overheating	178	101	—
Coccidiosis	174	60	—
Coryza	50	—	—
Eggbound and Internal Laying	37	—	—
Enteritis	31	23	—
External Parasites	8	—	—
Fowl Cholera	6	10	—
Fowl Typhoid	11	2	—
Impaction	53	30	1
Internal Parasites	88	2	—
Laryngotracheitis	2	—	—
Leucosis	89	1	—
Neoplasm	10	—	—
Nutritional Disorders	30	17	3
Omphalitis	3	—	—
Perosis	—	17	—
Poisoning	6	1	2
Pullorum (Adult)	18	—	—
Pullorum (Chick)	60	20	—
Paralysis	9	—	—
Paratyphoid	29	25	—
Sinusitis	—	5	—
Tuberculosis	102	14	2
Visceral Gout	11	—	—
Miscellaneous	58	28	3
No Evidence of Disease or Putrid	111	31	7
Total	1,196	390	18

Although the number of poultry specimens submitted has greatly increased in the last few years, this does not necessarily indicate an increase of disease in the Alberta poultry population but rather an increased awaredness to poultry disease by poultrymen and their advisers.

The number of turkey specimens submitted is almost double that of last year. There is also an increase in the miscellaneous submission, which included wild ducks, partridge, canaries, etc.

The number of definitely diagnosed specimens under the miscellaneous portion of the table has risen from 24 in 1947 to 83 in 1948. These included conditions not commonly encountered but listed for greater statistical accuracy.

THE SUBMISSION OF SPECIMENS

The number of specimens too badly decomposed for accurate diagnosis was approximately the same as last year. The proper submission of specimens should be stressed to those concerned, i.e. sending express prepaid of two or three live sick birds or freshly dead specimens packed in ice or dry ice to prevent post-mortem decomposition and include a letter giving the number in the flock, number dead or ill, the course and symptoms of the condition on the premises, feed given and any other data deemed pertinent.

AVIAN TUBERCULOSIS

Specimens examined with avian tuberculosis infection rose from 79 in 1947 to 118 in 1948, or approximately 8% of the total. This does not give any accurate idea of the prevalence of avian tuberculosis in Alberta as many variable factors come into play. However, the number of birds examined at this laboratory is merely a tiny fraction of the number that did die throughout the Province, and considering such a comparatively high percentage of these were infected with avian tuberculosis it is only logical to assume that this disease is quite widespread in the Province and is in fact one of our major poultry disease problems in Alberta.

Avian tuberculosis is very difficult to stamp out, but it can be controlled by accurate diagnosis; depopulation of the old flock and re-population with day-old chicks on uncontaminated ground utilizing clean equipment.

PULLORUM DISEASE

Salmonella pullorum was isolated from 98 chicks, turkey poults and adult fowl. Specimens submitted were approximately the same as in 1947.

The whole blood pullorum testing of birds producing eggs for hatching purposes conducted under the direction of the Poultry Commissioner was highly instrumental in controlling the disease.

With the active co-operation of the Poultry Commissioner and Inspectors of the Poultry Branch, many birds giving non-specific reactions to the whole blood pullorum test have been submitted for research into the problem of non-pullorum reactions. Salmonella pullorum was isolated in 7 out of 26 of these cases. In 22 out of 26 cases definite abnormalities were noted that would impair the health of the birds.

In many cases, organisms were isolated that gave cross-agglutination with Salmonella pullorum antigen. Cultures of these are being prepared for shipment to other laboratories for additional research. Cultures of the Salmonella pullorum were also sent to the Ontario Agriculture College for Serological typing. Two Salmonella pullorum intermediate were isolated, the rest were of the regular type.

Mention should be made that Canada leads the world in control of pullorum disease.

No. of Non-Pullorum Reactors Examined	Salmonella Pullorum Isolated	No. Showing Abnormalities	No. From Which Cross-Agglutination Organisms Isolated
2	2	—	—
3	—	3	3
2	—	2	—
1	—	1	—
1	—	1	—
1	—	1	1
1	—	—	1
1	—	1	1
1	1	1	—
2	—	2	2
1	—	1	—
2	—	2	2
1	—	1	1
1	—	—	1
1	—	1	1
1	—	1	1
2	2	2	—
2	2	2	—
Total 26	7	22	14

Abnormalities: Necrosis of liver, caseated concretions in oviduct, long-necked, dark ova, caseated ova, abscess in abdominal cavity, concretion in Bursa of Fabricus, enlarged spleen, peritonitis, cystic right oviduct, internal laying, erythroblastosis.

SALMONELLOSIS

A number of specimens on bacteriological examination revealed infection with Salmonella other than Salmonella pullorum. Cultures of these Salmonella were submitted to the University of Alberta for accurate Serological typing. The Salmonella table gives the name and number of the Salmonella typed. These were mostly isolated from chicks and turkey poults, as paratyphoid (acute Salmonellosis) chiefly affects young birds.

SALMONELLA TABLE

Type	Number
Salmonella Thompson	1
Salmonella Cholerasius	1
Salmonella Oranienburg	9
Salmonella Bariélly	7
Salmonella Typhi Murium	3
Salmonella Gallinarum	5
Total	26

These findings are of some public health importance in that organisms of this type have been identified as the cause of various food poisoning outbreaks in human beings.

FOWL CHOLERA

The Pasteurella of fowl cholera has been isolated with increasing frequency in the specimens submitted in 1948. This is especially true in turkey specimens in which the organisms appear highly virulent. An example of this was brought to our attention in November, 1948, when a Veterinarian presented four dead turkeys for examination. Blood smears showed the typical bi-polar organisms. Recommendations were made regarding medication of the drinking water with a high concentration of sodium sulphamethazine. A dilution of 1.100 was tried, but the

birds would not drink until this concentration was reduced to 1:250. Immediately after medication, no further losses were experienced.

LEUCOSIS COMPLEX

A large number of specimens were affected with leucosis. The most common form observed was visceral lymphomatosis with the liver, spleen and kidneys being the organs mostly involved. Several specimens exhibited other manifestations of the leucosis complex such as erythroblastosis, osteopetrotic lymphomatosis and neural lymphomatosis.

NUTRITIONAL CONDITIONS

Deficiency of Vitamin A was the most common nutritional condition observed. Vitamin D, riboflavin and panthothenic acid deficiences were also observed.

PARASITES

Many specimens exhibited infestation with lice. The treatment generally recommended was application of nicotine sulphate to the roosts used by the birds.

Infestation with caecal worms (Heterakis gallinae) was observed frequently in specimens submitted. The common round worm (Ascaridia galli) and the tapeworm (Davaine proglattina) were also present in a few cases.

SCALY LEG MITE

For the first time in Alberta, the scaly leg mite (Cnemidocoptes mutans) was isolated on December 20th, 1948. Only one bird appeared affected grossly. The case was brought in from the Athabasca district. Treatment with formalized vaseline was administered with promising results to date.

FAVUS

One case of favus was observed here. Treatment with formalized vaseline appeared to give favorable results.

NEWCASTLE'S DISEASE

No cases of Newcastle's Disease have been diagnosed in Alberta. Several suspected cases were carefully checked but were found suffering from other conditions. Careful vigilance is being observed for any sign of this condition in the Province due to its prevalence in the U.S.A. and its possible transmission from that country. A few cases have occurred in other parts of Canada, and the affected flocks immediately slaughtered.

FOWL POX

No cases of Fowl Pox or of Avian Diphtheria were noted this year.

MISCELLANEOUS

D.D.T. poisoning in canaries was observed, caused by the application of D.D.T. to the cages and the ingestion by the birds of the D.D.T. crystals.

A fungus of the Aspergillus group was isolated from intestinal lesions of a Spruce grouse, sent in from the Rocky Mountain House district.

Glass poisoning was seen in a small group of turkeys.

Carbon monoxide poisoning was diagnosed on post-mortem examination and chemical analysis of the blood of several young chickens that had been shipped to Edmonton in a van-type truck.

25% of the birds in this shipment were found dead on arrival. The history revealed that the birds had been loaded 24 hours before. The facts that the van was apparently well ventilated, that a few birds in each crate were still alive, and that lesions of avian tuberculosis were present in most of the dead birds, tended to temporarily complicate specific diagnosis.

During the past few months, a Poultry Diseases Library has been started. All available pamphlets, bulletins and reprints have been requested from each province in Canada and the Dominion Department of Agriculture, each state in the U.S.A. and the U.S. Federal Department of Agriculture, a great many Canadian and U.S. universities and research stations, and the Ministry of Agriculture in Great Britain.

The response has been excellent, with replies and requested literature received from many approached.

Several interesting poultry pathological specimens have been saved and mounted in plastic jars. These are very useful in illustrating addresses on poultry diseases.

PSEUDOMONAS INFECTION IN TURKEYS

Details of the work on this condition were not completed in time to be mentioned in last year's report.

Pseudomonas infection in turkeys appears to be quite rare. Such an infection broke out in the vicinity of Brooks in December, 1947, when three large turkey ranchers lost heavily. Several other farms were similarly affected in the southern part of the Province. This infection in turkeys occurred in Eastern Canada and the United States, but it had never before been reported in Western Canada.

The condition occurred following a Chinook after a heavy fall of snow. The birds had access to melted snow and slush. The pseudomonas, which is principally a soil and water bacteria, was in this case pathogenic to turkeys. The turkeys picked up the pseudomonas organism in the contaminated water, which caused the disease with high morbidity and high mortality. The disease directly caused by pseudomonas infection was also indirectly due to the changeable weather conditions that prevailed at that time.

Further research carried on by the laboratory indicated that sodium sulfamethazine was helpful in treating early cases and preventing further spread. The 1948 November issue of the A.V.M.A. reports sulfamerazine to be effective in controlling a natural outbreak of pseudomonas infection, when an early diagnosis was established.

Dr. C. H. Bigland was in attendance at the Provincial Poultry Show held in Wetaskiwin. The purpose was to examine each entry for evidence of infectious disease and assist show officials in a professional capacity.

SHEEP DISEASES

No serious outbreaks of disease were reported during 1948. Losses occurred from disease of the newborn, stiff-lamb disease, dysentery, pregnancy disease of ewes, hemorrhagic septicemia, pulpy kidney disease, enteritis and internal parasites.

COBALT DEFICIENCY

This Branch is co-operating with a Provincial Committee on an investigational project to find districts where there is a cobalt deficiency in the soil and forage. Sheep are being used for this work.

HORSE DISEASES

ENCEPHALOMYELITIS

Only four cases of this disease were reported during 1948. These occurred during the months of August and September. From reports, a large number of horse owners had had their horses immunized earlier in the summer against this disease.

SWAMP FEVER

An outbreak of this disease, which is caused by a virus, occurred in the Cold Lake district. Upon investigation, it was found that between 40 and 60 horses had died during the summer.

Horses which have apparently recovered from the disease remain carriers, and some animals which are in apparent normal health are also capable of spreading the disease.

While it seems that little can be done to control the disease in the Cold Lake district—there is no known cure—the problem remains that the transfer of horses out of such a district brings with it the accompanying danger of spreading the virus of Swamp Fever to other areas.

SWINE DISEASES

RHINITIS

All swine going to the Royal Winter Fair were examined for Rhinitis. This disease is still a problem in Alberta. Premises were visited where after years of successful hog raising they had become badly infected with the causative organisms of Rhinitis. The infection in this case could be traced to the introduction of an infected boar and serves as a warning that great care must be exercised in the purchasing of new stock. Research at the Ontario Veterinary College has proven that Rhinitis is highly infectious to young pigs. Reports were given to the press advising swine breeders to avoid and control this disease.

SWINE ERYSIPELAS

Several cases of swine affected with erysipelas were submitted to the laboratory the past year. It is known that many cases of arthritis in swine in the Province are due to chronic erysipelas. The causative organism of this disease, Erysipelothrix rhusiopathiae, has been isolated from joints of a number of cases recently submitted.

Animals infected with swine erysipelas should be isolated and the herd inspected daily for further evidence of the disease. Herds showing clinical symptoms and gross autopsy lesions of acute swine erysipelas should be treated by the local veterinarian pending a definite laboratory examination.

Healthy, susceptible swine should be kept away from contaminated houses, lots and pastures. Carcasses of diseased swine should be deeply buried or burned.

Contaminated houses should be thoroughly cleaned by being scraped, brushed or swept and should then be scrubbed with hot lye water, one pound of lye to thirty gallons of water. After the lye solution has been allowed to dry two or three days, the house should be sprayed with a 3% compound of cresol solution or its germicidal equivalent. All manure from contaminated houses should be spread thinly on ground not used for these susceptible animals.

When purchasing replacement stock, extreme precaution should be exercised. Swine erysipelas is commonly introduced on a farm by the purchase of chronically infected animals that appear healthy. The McLean County System of swine sanitation, which has proven effective in the prevention of roundworm infestation as well as pig paratyphoid and necrotic enteritis, is valuable in preventing losses from swine erysipelas. While these measures may not effectively prevent the malady in all herds, it is apparent that frequent changes of pasture are a practical preventive measure of value. Poorly drained ground and the continuous use of the same ground year after year for hogs favor the development of swine erysipelas.

SWINE INFLUENZA (Hog Flu)

This disease, the past fall, has caused hog ranchers in the Province more concern than usual. Many cases occurred during a change to cold weather in the early winter.

The mortality rate is low as a rule, but it is advisable to seek the advice of a registered Veterinarian and provide the herd with warm, dry, clean pens, and feed sparingly.

NECROTIC ENTERITIS

Quite a large number of pigs submitted to the laboratory during the past year were found to have suffered from this disease.

Necrotic enteritis is an infectious disease affecting pigs from six weeks to four months, but sometimes older pigs are affected. It is caused by a pacterial infection and spreads rapidly in a herd of young swine. Another causative factor appears to be a deficiency of "Vitamin B Complex". The disease makes its appearance when hogs have been kept for years on premises where sanitation has been neglected.

A general clean-up of the premises should be carried out, moving healthy pigs to clean ground. A balanced ration of soft, easily digested food must be provided.

Sick pigs should be confined, if possible, on a cement floor which must be cleaned daily by washing thoroughly with water containing a disinfectant, after which the floor should be well sprinkled with dry lime.

FUR ANIMAL DISEASES

Considering the large number of fur-bearing animals on the 1,800 ranches in Alberta, the losses from disease were very low. This may be due in part to the efforts of this Branch and the Fur Supervisor in urging fur ranchers to submit sick animals to the Veterinary Laboratory for a diagnosis at the first sign of disease. In the few outbreaks of distemper this year, an accurate diagnosis at the beginning, followed by prompt control measures, has saved the ranchers thousands of dollars.

DISTEMPER VACCINE BANK

A Mink Distemper Vaccine Bank was established in July, the purpose of which is to maintain a readily available supply of vaccine. Thus, costly losses during an outbreak of distemper can be avoided by immediate use of the vaccine to immunize the remaining animals. Before the establishment of the bank, a delay of several days was encountered as the vaccine had to be imported. 16,560 c.c. of vaccine have been supplied to 20 fur ranches

at nominal cost. Autogenous mink vaccines are produced in the laboratory only in special instances where commercial vaccine has failed to check a distemper outbreak. 2,000 doses of autogenous vaccine were prepared and distributed in 1948. The greater percentage of this was produced before the establishment of the Vaccine Bank.

Two hundred and fifty doses of Fox Distemper Vaccine were also supplied for one outbreak of Fox Distemper.

ENTERITIS

Of the sporadic diseases, enteritis or diarrhoea, commonly referred to as food poisoning, is apparently of greatest occurrence. It is most prevalent during the warm summer months, when special care is required in the handling of meat and fish to prevent spoilage. Repeatedly, improper rations or lack of care in ranch management and poor standards of sanitation have been found to be the cause of disease on fur ranches.

VITAMIN B DEFICIENCY IN MINK

It is now recognized that certain species of fish, when mixed with the mink and fox rations, will destroy the Vitamin B content in a very short time. The Vitamin B requirements are ordinarily considered to be met by supplying fresh liver and fortified cereals.

Recommendations were given for the treatment of the affected animals with Sulfaguanidine, reduction in the percentage of fish blocks in the ration, defrosting and grinding of only one day's ration at a time, and the addition of 1% Brewer's Yeast.

One sick animal which the owner declared would be dead in 24 hours was brought to the laboratory for observation. This animal was fed on a good, well-balanced ration with extra liver included and within four days was vigorous and quite normal. On the ranch, the animals were in a satisfactory state of health in two weeks' time. The diagnosis was of a true case of Vitamin B deficiency, the result of a ration deficient in the vitamin, and the improper handling of the fish and meat mixture served to still further reduce the Vitamin B content.

The second case of a similar nature occurred on a well managed fur ranch of approximately 800 mink. Previous years, this rancher had done all his own butchering, but had installed a freezer and was now drawing from a supply of frozen meat, frozen fish and commercial cereal.

The animals had not been seriously sick, although three had died in a period of six weeks. All three carcasses had been examined at the laboratory, post-mortem disclosing inflammation of the intestinal tract, but inconclusive culture results. The owner, however, was not satisfied with the condition of the animals, and in his own words they "Just didn't seem to be doing right". At his request, a visit was made to the ranch. The only common symptoms observed were lack of liveliness and a weakness of the hind quarters. Some animals could not walk straight with their hind legs. Again the diagnosis was of Vitamin B deficiency.

Based upon investigations conducted on two fur farms during the year, the conclusion of this Branch is that Brewer's Yeast, providing an excellent source of Vitamin B, should be incorporated in most mink and fox rations, especially where there is a high percentage of fish in the diet.

RINGWORM IN MINK

A live mink was submitted to the laboratory for examination showing marked scaliness of the hide and foot pads with loss of hair. The pelt was sent to the Ontario Veterinary College, where the condition was diagnosed as ringworm. There had been five animals on the ranch affected. All the affected animals were destroyed, but despite all efforts we were unable to trace the source of the infection.

RICKETS IN MINK

The disease rickets is not often seen now that ranchers realize that it can be prevented by feeding a well-balanced ration. However, two known ranches suffered heavy losses from this condition during the past year. One small rancher lost over one hundred and fifty kits and over twenty-five foxes from this condition. Following removal of the cause, the mortality rate was greatly lessened, but the condition of rickets was so advanced that the animals remained stunted and deformed in stature.

Mink cannot tolerate for any length of time an exclusive meat diet. A well-balanced diet must be administered with an adequate supply of calcium, phosphorous and Vitamin D.

TULAREMIA IN BEAVER

In mid-December, a portion of a beaver was submitted to the laboratory for examination by the Department of Mines and Resources from Fort Smith, N.W.T. Post-mortem examination revealed lesions on the lungs, liver and spleen. Microscopic lesions were not noted in the lymphatic system. The organism of Pasteurella tularensis was isolated from the lesions. The diagnosis was Tularemia. There is no previous record of Tularemia in this area and it is the first time that the organism has been isolated in this laboratory.

Tularemia is primarily a disease of wild rodents, especially rabbits. Man is affected secondarily, and for this reason, the utmost care was taken in working with this specimen. It is interesting to note the animals susceptible. The disease has been found in the following: (a) wild animals in their natural state, cottontail rabbits, jack rabbits, snowshoes, hare, ground squirrel, tree squirrel, coyote, fox, muskrat, deer, bull snake, ground hog, skunk, wild rat, chipmunk, prairie dog and beaver; (b) natural infection in several of the domestic animals has been found, including sheep, hog, cat and dog, but these animals are not very susceptible, the horse and cow are apparently immune; (c) wild birds, such as the sage hen, quail, ruffled grouse and sharp-tailed grouse are naturally infected, but the tularemia organism seems to be of lower virulence. The domestic hen, turkey and pigeons are apparently immune.

CATTLE DISEASES

(1) TUBERCULOSIS

(A) Restricted Area Plan

The Dominion Department of Agriculture, Health of Animals Branch, Veterinary Inspectors, test all the cattle in a given area. Reactors have to be sold for slaughter to an abattoir under Federal Inspection. Compensation is paid for reactors.

In Alberta, the following municipalities are T.B. Restricted Areas, Nos. 47, 54, 63, 82, 83, 73 and 75. The test has been completed in the first five named municipalities, with 26,894 and 7,127 cattle tested in the last two respectively. The percentage of T.B. reactors has been very low. In approximately a quarter of a million cattle tested to date, there has only been sixteen reactors in every ten thousand cattle.

(B) Private Testing

A great many progressive live stock men want their herds free from tuberculosis. Their local veterinarian is employed to make the test. The Dominion Health of Animals Branch supplies the tuberculin and the Alberta Department of Agriculture supply the eartags for proper identification. During 1948, 3,909 eartags were supplied by this Branch for the private tests.

(2) BRUCELLOSIS (Bang's Disease)

More live stock men are undertaking to eradicate this disease from their herds. Dairymen are finding it increasingly difficult to buy additions for their herds that are free from brucellosis. As a result, more thought is being given to prevention and control of the disease. The economical method of procedure to eradicate brucellosis from a herd is to follow a programme of calfhood vaccination for from four to five years. As these heifers mature, they can replace the reactors, which should only be sold for slaughter. Many Alberta dairymen and ranchers have eliminated the disease from their herds by this method.

(A) Testing

The increasing interest in brucellosis is shown in the number of blood samples submitted to the Alberta Veterinary Laboratory for the agglutination test. The total was 13,529, which is a marked increase, almost doubling the number submitted during 1947.

The following table shows the tests covered on brucellosis and indicates the percentage of reactors:

BLOOD TESTS FOR BRUCELLOSIS (BANG'S DISEASE)
1948

	Provincial Blood Tests	%	Dominion Blood Tests	%	Total No. Blood Tests	%
Number Positive	1,164	9.07	29	4.15	1,193	8.22
Number Suspicious	538	4.19	23	3.28	561	4.15
Number Negative	11,072	86.3	648	92.5	11,720	86.63
Number of Broken Vials or Hemolyzed Samples	55	.44			55	.40
Total Number of Blood Samples	12,829		700		13,529	

Provincial blood tests are those taken by practising veterinarians. Dominion blood tests are those submitted by Federal Veterinary Inspectors. The Health of Animals Branch approved the Alberta Veterinary Laboratory early in 1948 for the testing of blood samples from Brucellosis-free Listed Herds which are under their supervision and for cattle consigned for export. This has given the laboratory an official standing and is a long-desired service for Northern and Central Alberta. Previously, the blood samples for export cattle had to go to the Lethbridge Research Laboratory, which meant a considerable delay for samples originating in the Edmonton and surrounding districts.

(B) Calfhood Vaccination

The amount of Brucella abortus strain 19 vaccine supplied for vaccinating calves between the ages of 4 to 8 months is steadily increasing. During 1948, 9,019 doses were distributed, free of charge. The vaccine builds up a resistance in calves against brucellosis. Live stock men are realizing the value of calfhood vaccination, with the result that many applications were received this year from owners not previously enrolled.

VETERINARY LABORATORY

The new laboratory was not completed during 1948, but should be early in 1949. The poultry diseases laboratory will be in the basement and the animal diseases laboratory on the first floor. These enlarged facilities will be greatly appreciated. The new laboratory will permit keeping large animals for observation, which will be a distinct advantage in investigational work.

An estimate of the total loss from animal and poultry diseases in Alberta amounts to several hundred thousand dollars annually. The work at the veterinary laboratory, through the diagnostic service and investigational work, prevents this loss from being much greater. With the new laboratory, many of the disease problems of live stock will be investigated more fully than the present facilities permit.

With more veterinarians in the Province, the volume of work will increase considerably every year. Also at practically all meetings addressed by members of this Branch, the services of the laboratory are mentioned, with the result more specimens are being received from areas not served by a veterinarian.

The report of the poultry diseases laboratory is included under Poultry Diseases. The following table lists 62 diseases found in 17 different species of animals submitted to the animal diseases laboratory. A study of the table indicates the variety of work covered.

ANIMAL DISEASE TABLE

	Beaver	Bison	Cat	Cattle	Chinchilla	Deer	Dog	Fox	Hamster	Horse	Mink	Monkey	Moose	Rabbit	Sea Lion	Sheep	Swine	Miscellaneous	Totals
Abortion											1								1
Abscess				7	2		1			2	9					1	2		24
Acidosis											22								22
Actinomycosis				2													11		13
Anemia			1								5						16		22
Arthritis																	1		1
Blackleg				16															16
Breeding Difficulty				1							7						3		11
Brucellosis				2															2
Chilling and Overheating																	1	5	6
Coccidiosis											4			1					5
Corynebacterium Infection				3													2		5
Cystitis				1							3								4
Diphtheria				1															1
Disease of Newborn				1												18			19
Distemper							3	7			59								69
Errors in Feeding											9						3		12
Flesh Flies											17								17
Food Poisoning							1		1	156									158
Foot Rot				2															2
Gastritis and Enteritis			2	2	7		4		1		50	1		2		2	71		142
Goitre							1												1
Impaction					4														4
Injury							2	1			4						2		9
Internal Hemorrhage				1							1						1		3
Johne's Disease				2															2
Leukemia																	1		1
Malignant Oedema				3						1									4
Mastitis				133															133
Metritis					3														3
Necrobacillosis				5															5
Necrotic Enteritis																	23		23
Nephritis				1															1
Nursing Sickness											21								21
Parasites External				2							1								3
Paratyphoid											18				1		1		20
Pasteurella Infection				15										2		8	30		55
Peritonitis				1													1		2
Pneumonia				4	2	1	1				27					1	37		73
Poisoning (Chemical)			1	4			3										2		10
Pregnancy Disease																1			1
Pulpy Kidney Disease																1			1
Rhinitis																	2		2
Rickets								1			11								12
Roundworms							3			3						2	15		23
Scours				6													15		21
Septicaemia				1	1						8						2		12
Slobbers					2														2
Stiff Lamb Disease																1			1
Swamp Fever										2									2
Sweet Clover Disease				1															1
Swine Erysipelas																	3		3
Swine Influenza																	6		6
Tail Chewing											2								2
Tapeworm						1							1			2			4
Tuberculosis		2		6						1				1			2		12
Tularemia	1																	2	3
Tumor				1			2			3	2								8
Toxemia of Pregnancy					1						3								4
Uraemia											3								3
Urinary Calculi				2	2						18								22
Yellow Fat											8								8
No Evidence of Disease or Putrid				43		1	2		1	4	7		2				20	12	92
Miscellaneous				5							3		1			1	1	1	12
Faeces				3						3	2								8
Totals	1	2	4	274	24	3	22	10	2	20	480	1	4	6	1	38	274	20	1,187

BANG'S AND MASTITIS PROGRAMME

The former Mastitis Programme for the Edmonton Milk Shed was revamped to include Brucellosis (Bang's Disease). This was thought advisable because brucellosis is transmissible to humans, in whom it causes undulant fever. The Bang's Disease and Mastitis Programme is a co-operative effort of the Department of Agriculture (Dairy and Veterinary Services Branches), the distributors, the veterinarians and the producers.

A series of well-attended meetings in November were held at Otaskawan School, North Edmonton Hall and the East Edmonton Hall, to introduce the programme to the producers. Films were shown on Mastitis and correct milking procedure. Talks were given on Mastitis and Brucellosis, as well as explaining the programme. Dr. G. M. Little, Edmonton Medical Health Officer, and Dr. J. A. Gillett, Director of Communicable Diseases, discussed the dangers of these two diseases in relation to public health.

Considerable interest in the programme has been shown by the producers, with several enrolling their herds to date. Statistical information on the success of this programme should be available for next year's report.

SPECIMEN TABLE

Species	Live	Dead	Portions	Totals
Beaver	—	—	1	1
Bison	—	—	2	2
Cat	1	2	1	4
Cattle	4	14	128	146
Chinchilla	5	15	3	23
Deer	—	1	2	3
Dog	2	8	9	19
Fox	1	10	—	11
Hamster	—	2	—	2
Horse	—	—	15	15
Mink	84	339	4	427
Monkey	—	1	—	1
Moose	—	—	4	4
Rabbit	—	5	1	6
Sea Lion	—	1	—	1
Sheep	4	18	14	36
Swine	49	121	49	219
Miscellaneous	—	12	—	12
Blood Samples	—	—	62	62
Faecal Samples	—	—	8	8
Feed Samples	—	—	18	18
Milk Samples	—	—	163	163
Urine Samples	—	—	13	13
Totals	150	549	497	1,196

REPORT OF FUR FARMS BRANCH

D. R. FRASER, Fur Farm Supervisor

On June 30th, 1948, Mr. J. Keith retired from office and we wish to acknowledge the valuable assistance he has rendered to the Fur Farming Industry in Alberta throughout the course of his six years' service as Fur Farm Supervisor.

Mr. D. R. Fraser was Acting Supervisor until September 8th and at that time was appointed Fur Farm Supervisor to succeed Mr. Keith.

The following are the main duties of the Fur Farm Supervisor:

1. To plan and direct the raising of fur-bearing animals in captivity and to plan policies for the industry.

2. To enforce such regulations and make such inspections as may be required by the Game Act.

3. To carry on such extension and educational programmes and activities as may be determined, including attending of meetings, preparation of bulletins, etc.

4. To obtain and distribute all available information on fur production and marketing.

5. To assume such other duties as may be required.

THE FUR MARKET

Foxes

During the early months of 1948 better market conditions were experienced than had prevailed during most of the previous year. After a brief period all markets again became more or less demoralized. From early April until the present time, it has been difficult for the marketing houses to make clearances except at extremely low price levels.

Mink

From January until November this year, the various types of mink, but more particularly the standard, silver-blu and pastel types, enjoyed reasonable demand at satisfactory prices, although now that the new marketing season has commenced there seems to be considerable hesitancy on the part of the trade to take on stocks except at extremely reduced prices, ranging at reductions of 25% to 35% from previous sales. In many instances, the prices offered are lower than the cost of production. Unfortunately, there is every indication that this unsettled market condition will prevail well into the year 1949.

FEED SUPPLY

The supply of horse meat during 1948 was more plentiful in all districts than it had been during the 1947 season. The Horse Co-operative Marketing Association Ltd. at Edmonton was in a position to adequately supply the northern and central districts with their meat requirements, and Red Top Products in Calgary supplied the southern sections.

In March, the Edmonton Fur Breeders' Fish Co-op was extended to include the northern districts and to supply them with

Coast fish. During the summer months four carloads of fish were purchased from the Fisherman's Co-op at Prince Rupert to supply the needs of the Co-op members.

Lesser Slave Lake was opened to the fur farmers on August 1st, which also alleviated the situation considerably.

BREEDING STOCK

At the commencement of the year 1948 there was a definite decrease in the number of mink retained for breeding stock, which was justified by the unsettled market conditions of the previous fall season.

The fox breeders again reduced their stocks but were determined to carry on as there was every indication that the demand for fox pelts was gradually increasing.

The quality of the breeding stock kept in both mink and foxes has greatly improved as the majority of Alberta fur breeders realize that to survive in the industry the production of top quality stock is essential.

HEALTH

Although the report on health of fur-bearing animals will no doubt be dealt with by the Veterinary Services Branch, we would like to express our sincere appreciation for the splendid assistance and co-operation that they have given to the fur farmers throughout the Province.

The number of specimens of fur-bearing animals submitted to the laboratory for post-mortem examination is increasing each season as the fur farmers realize the advantages of this valuable service that is available to them.

On June 8th an outbreak of "Flesh Fly" maggot infestation of mink kits was reported. This infestation reached epidemic proportions by the last week in June. There were approximately 120 ranches in the Edmonton district infected. Warnings to fur farmers in the newspapers and over the radio, issued by this Branch, were very beneficial in combatting the fly, and consequently losses were kept at a minimum.

In July, 1948, at the request of the Alberta Fur Breeders' Association, a distemper vaccine bank was established by the Department of Agriculture and is being maintained under the supervision of the Director of Veterinary Services. An immediate supply of mink distemper vaccine is available at all times for emergency and routine vaccinations. Having a supply of vaccine on hand for immediate use has greatly assisted in controlling the distemper situation throughout the Province.

FIELD DAYS

Live fox and mink field days were held at the following points:

Joussard—October 19
Faust—October 20
Lac La Biche—October 22
Wildwood—October 25
Wabamun—October 26
Round Hill—October 27
Stettler—October 28
Red Deer—October 29
Drumheller—October 30
Medicine Hat—November 1
Edmonton—November 4

Due to an outbreak of distemper on a Slave Lake ranch, it was decided to hold a meeting instead of the usual Field Day.

At the field days in the northern districts, where the services of a veterinarian are not readily available, demonstrations of proper vaccinating technique were given by Dr. J. O'Donoghue, the Extension Veterinarian. These demonstrations were greatly appreciated by the fur farmers in those districts and their associations have expressed the desire to have a similar demonstration in conjunction with the field days again next season.

The field day attendance and entries were exceptionally good in all instances, with well over 100 entries submitted for judging and comment at each point. It has been brought to our attention that the Alberta Live Fox and Mink Field Days are greater in number, attendance and number of animals exhibited than in any other province in the Dominion of Canada.

PELT SHOW

The annual Mink and Fox Pelt Show was held again on January 6, 7 and 8, 1948, in the Massey-Harris Show Room in Edmonton.

The show was very well patronized, the entries consisted of 499 mink pelts and 362 fox pelts from all sections of the Province. Judge of the mink classes was Mr. Norman L. Boyd, of Little Brothers Fur Sales Agency Ltd., Vancouver, B.C. In the fox classes, Mr. Walter F. LeFurgey, President of the Saskatchewan Fur Breeders' Association, handled the judging. The awards were very evenly distributed throughout the Province.

LIVE ANIMAL SHOW

This eleventh successive show was held at the Calgary Exhibition Grounds on November 22nd, 23rd, 24th and 25th. The number of exhibits was somewhat smaller than the previous Live Animal Show held at Edmonton; however the quality on the average more than made up for the smaller number of entrants. Judges of the mink classes were George H. Mayers and Herbert Mayers, of Lampson, Fraser & Huth Inc., New York. The fox classes were judged by George W. Harris, of the Hudson's Bay Company Ltd., Montreal. Entries were received from practically every district in the Province, as well as from Manitoba, Saskatchewan, British Columbia and Wisconsin, U.S.A.

INSPECTION OF FUR FARMS

Fur farm inspections were conducted in the following districts during July, August and September:

West Edmonton District	Wildwood
Winterburn	Chip Lake
Woodbend	Northville
Wabamun	Plamondon
Seba	Lac La Biche
Gainford	Le Goff
Entwistle	Slave Lake

FUR FARMING LITERATURE

Three bulletins were issued by this Branch during 1948:

"Tail Chewers in Mink"
"Control of Boils in Mink"
"Pneumonia in Mink"

At the time of writing this report, a booklet entitled "Mink Ranching in Alberta" has been compiled and it is expected that it will be available for distribution in the near future. "Mink Ranching in Alberta" covers most phases of the industry. The section on practical ranching, feeding and breeding was drafted

by the writer of this report and the section on disease was written by Dr. G. S. Wilton, Veterinary Pathologist of the Veterinary Services Branch. It is anticipated that this booklet will be in popular demand as we already have over 100 written requests for it to date.

SHORT COURSES

In March of this year a short course in Fur Farming was conducted at the Olds School of Agriculture. Arrangements have been made to provide similar courses at Olds and Vermilion in February and March of 1949.

FUR BREEDERS' ORGANIZATIONS

The Alberta Fur Breeders' Association has organized 14 local branches at the following points:

Calgary	Lac La Biche	Slave Lake
Drumheller	Macleod	Stettler
Edmonton	Medicine Hat	Wabamun
Faust	Red Deer	Widewater
Joussard	Round Hill	

The districts of Wildwood and Cold Lake have signified their intentions of forming branches this coming season. The local associations are of great value to the producer as they are an excellent medium for exchanging information and discussing problems pertaining to the industry.

The Alberta Fur Breeders' Association acted as host to the Dominion Fur Breeders' Council and the Mutation Mink Breeders' Association in May of this year. The joint meetings were held at the Palliser Hotel in Calgary and were exceptionally well attended by members from every province in the Dominion and from several states of the Union.

FUR FARM STATISTICS FOR YEAR ENDING AUGUST 31st, 1948
NUMBER OF ANIMALS DECLARED ON FUR FARMS IN ALBERTA 1947-48

Kind of Animal	Total No. Of Animals	Av. Value Per Animal	Total Valuation
Fox, Silver	9,938	$ 19.90	$ 197,766.20
Fox, White Marked Silver	7,737	18.15	140,426.55
Fox, Platinum	5,833	46.68	272,284.44
Fox, Pearl Platinum	738	63.82	47,099.16
Fox, Pearlatina	192	48.80	9,369.60
Fox, Glacier Blue	165	71.50	11,797.50
Fox, Arctic Blue	743	15.45	11,479.35
Fox, Arctic White	44	22.66	997.04
Fox, Cross	259	22.00	5,698.00
Fox, Red	17	11.00	187.00
Mink, Standard	223,550	18.42	4,117,791.00
Mink, Platinum	18,036	32.00	577,152.00
Mink, Silver Sable	2,347	16.47	38,655.09
Mink, Black Cross	10,151	9.90	100,494.90
Mink, Blue Cross	283	9.90	2,801.70
Mink, 95% White	2,436	23.52	57,294.72
Mink, White	264	28.18	7,439.52
Mink, Pastel	1,026	42.00	43,092.00
Mink, Glacier Blue	307	12.50	3,837.50
Mink, Ebony Blue	176	12.35	2,173.60
Mink, Aleutian	6	85.00	510.00
Mink, Platinum Hybrids	4,718	16.00	75,488.00
Mink, Pastel Hybrids	335	25.00	8,375.00
Mink, Breath of Spring Platinum	154	50.00	7,700.00
Mink, Breath of Spring Pastel	43	45.00	1,935.00
Mink, Others	324	15.00	4,860.00
Chinchilla	372	65.00	24,180.00
Marten	105	65.00	6,825.00
Fitch	324	4.00	1,296.00
	290,623		$5,779,005.87

FUR FARM LICENSES 1947-48 SEASON

Fox	110
Mink	1,561
Fox and Mink	109
Marten	3
Fitch	4
Chinchilla	24
Total	1,811

NUMBER OF ANIMALS PELTED ON FUR FARMS IN ALBERTA 1947-48

Kind of Pelt	Total No. of Pelts	Av. Value Per Pelt	Total Valuation
Fox, Silver	7,775	$ 11.00	$ 85,525.00
Fox, White Marked Silver	5,546	11.00	61,006.00
Fox, Platinum	3,996	15.00	59,940.00
Fox, Pearl Platinum	459	20.00	9,180.00
Fox, Pearlatina	18	18.00	324.00
Fox, Glacier Blue	155	15.00	2,325.00
Fox, Arctic Blue	425	12.00	5,100.00
Fox, Arctic White	24	9.50	228.00
Fox, Cross	139	8.00	1,112.00
Fox, Red (including carryover previous year)	26	5.00	130.00
Mink, Standard	168,593	12.25	2,065,264.25
Mink, Platinum	5,641	22.00	124,102.00
Mink, Silver Sable	909	7.00	6,363.00
Mink, Black Cross	8,323	6.00	49,938.00
Mink, Blue Cross	93	8.00	744.00
Mink, 95% White	1,227	15.00	18,405.00
Mink, White	107	19.00	2,033.00
Mink, Pastel	254	30.00	7,620.00
Mink, Glacier Blue	105	8.00	840.00
Mink, Aleutian	3	21.00	63.00
Mink, Platinum Hybrids	1,842	14.00	25,788.00
Mink, Pastel Hybrids	153	14.00	3,142.00
Mink, Breath of Spring Platinum	4	35.00	140.00
Mink, Breath of Spring Pastel	nil		
Mink, Others	251	7.00	1,757.00
Chinchilla	nil		
Marten	8	40.00	320.00
Fitch	191	3.00	573.00
	206,267		$2,531,962.25

NUMBER OF LIVE ANIMALS EXPORTED FROM ALBERTA 1947-48

Kind of Animal	Total No. Of Animals	Av. Value Per Animal	Total Valuation
Fox, Silver	1	$ 25.00	$ 35.00
Fox, White Marked Silver	1	25.00	25.00
Mink, Standard	776	35.00	27,160.00
Mink, Platinum	252	50.00	12,600.00
Mink, Silver Sable	43	31.00	1,333.00
Mink, Black Cross	12	15.00	180.00
Mink, Blue Cross	9	15.00	135.00
Mink, 95% White	31	35.00	1,085.00
Mink, White	7	35.00	245.00
Mink, Pastel	6	65.00	390.00
Mink, Glacier Blue	2	15.00	30.00
Mink, Platinum Hybrid	126	35.00	4,410.00
Mink, Breath of Spring Platinum	15	85.00	1,275.00
Chinchilla	30	100.00	3,000.00
Marten	8	70.00	560.00
	1,319		$52,463.00

NUMBER OF ANIMALS RETAINED FOR BREEDING STOCK IN ALBERTA 1947-48

Kind of Animal	Total No. Of Animals	Av. Value Per Animal	Total Valuation
Fox, Silver	2,162	$ 23.00	$ 49,726.00
Fox, White Marked Silver	2,190	21.00	45,990.00
Fox, Platinum	1,837	45.00	82,665.00
Fox, Pearl Platinum	279	56.00	15,624.00
Fox, Pearlatina	174	50.00	8,700.00
Fox, Glacier Blue	10	45.00	450.00
Fox, Arctic Blue	318	20.00	6,360.00
Fox, Arctic White	20	20.00	400.00
Fox, Cross	120	15.00	1,800.00
Mink, Standard	54,181	22.50	1,219,072.00
Mink, Platinum	12,143	36.00	437,148.00
Mink, Silver Sable	1,395	19.00	26,505.00
Mink, Black Cross	1,816	10.50	19,068.00
Mink, Blue Cross	181	11.50	2,081.50
Mink, 95% White	1,178	25.00	29,450.00
Mink, White	150	27.00	4,050.00
Mink, Pastel	766	47.50	36,385.00
Mink, Glacier Blue	200	11.50	2,300.00
Mink, Aleutian	3	100.00	300.00
Mink, Platinum Hybrids	2,750	24.50	67,375.00
Mink, Pastel Hybrids	182	30.00	5,460.00
Mink, Breath of Spring Platinum	135	65.00	8,775.00
Mink, Breath of Spring Pastel	43	50.00	2,150.00
Mink, Others	249	25.00	6,225.00
Chinchilla	372	100.00	37,200.00
Marten	89	100.00	8,900.00
Fitch	133	6.00	798.00
	83,076		$2,124,958.00

REPORT OF APICULTURE BRANCH, 1948

W. G. le MAISTRE, Provincial Apiarist

The 1948 honey crop was 9,000,000 pounds. This is a record crop and places Alberta second to Ontario as a honey-producing province. The average production per hive was 129 pounds, which is 45% greater than the yearly average for the five previous years.

Very many of the smaller beekeepers, who operated during the war years to augment their sugar supplies with honey, have gone out of beekeeping. The reduction in the number of beekeepers is 29%. However, several commercial or semi-commercial beekeepers have increased the number of hives they operate, with the result that the total number of producing hives has been reduced by only 10%.

Statistics:

	Total Production '000 Pounds		Average Net Price Per Pound		Value in '000 Dollars	
	1947	1948	1947	1948	1947	1948
Honey	6,500	9,043	22c	11c	1,430	995
Bees Wax	91	118	45c	35c	41	41
					1,471	1,036

	1947	1948	% Change
No. of Beekeepers	9,500	6,700	—29
No. of Hives	77,000	70,200	—10
No. of Hives per Beekeeper	8.1	10.4	
Average Production per Hive (lbs.)	84	129	54

GENERAL

Beekeeping is experiencing difficult times. Operating costs for the year were high, averaging $16.16 per colony. The price of package bees was from $6.00 per two-pound package to $8.00 per three-pound package. Labour averaged $4.50 per hive.

While the honey crop is not so large that it would be consumed in the season, the demand is less brisk than experienced during times of sugar rationing. This lessened demand, coupled with a need to realize cash for expenses, led to considerable price reductions in offering honey for sale. Only the fact that the yield of honey per hive was large will prevent many operators from producing honey at a loss.

A considerable demand by clover seed growers to have colonies of bees near their fields has developed. Observations and tests made indicate the yield of seed to be much greater where there is a large bee population established in or near clover fields, when compared to seed yields where only wild bees are present.

Of Alberta's 77,000 hives in 1947, approximately 10,000 were prepared for winter. Of these, 4,000 died over winter or starved to death in the spring. A loss of 40% for wintered-over colonies is remarkably high. It has the effect of discouraging the practice. This is unfortunate, because where winter loss is low, to carry bees over winter should reduce operating costs.

This Branch has developed a satisfactory system of wintering bees in Alberta and published a bulletin to provide information on it.

SEASON

Snow and cold persisted through April and interfered with installing packages until later than usual. It was the middle of May before the bulk of hives were established—two weeks later than usual. When the snow was gone, all the willow blooms, delayed by the cold weather, opened. No damaging frosts occurred to interrupt bloom, and from mid-May on there was a practically continuous, and at times intense, honey flow. The alsike clover, which does not yield much before the end of June normally, was producing nectar on the 12th. No rain fell while alsike was in bloom, and by July 15th the flow had practically stopped. Rain in mid-July brought on a heavier honey flow than ever in August from sweet clover and a second bloom on alsike. With the exception of an area west of a line drawn between Warburg and Wetaskiwin, good honey crops were obtained in all districts.

MARKETING

All through the year, the movement of honey was slow in comparison with 1947. However, by the time the 1948 crop came on the market, most of the 1947 crop was sold.

The 1948 crop was moving well in the late summer, but by early winter there were many offerings and so many price concessions that movement was slowed considerably.

Producers are taking steps to accelerate sales and develop export markets in an effort to improve the demand.

The wholesale price declined from about 22c in July to about 16c in December.

DISEASE CONTROL

Ten Inspectors were active under the Bee Diseases Act. The most advantageous time for inspecting is brief, being during June and early July, and though special conditions make it necessary to inspect and regulate at other times, most of the work is concentrated into that period.

	1947	1948
No. of Hives Inspected	7,250	11,521
No. of Apiaries Inspected	878	1,008
No. of Hives Diseased (A. F.B.)	317	526
Diseased Hives % of Total	.48	.74

The amount of disease has increased considerably during the last year. It is now quite widely distributed throughout the Province and has infected many colonies at Tilley, Gem, Lacombe, Swalwell, Warburg, Vermilion, Westlock and Athabasca.

This Branch maintains a diagnostic service. Samples of suspected disease are examined and the sender advised of recommended treatment for affected colonies.

American Foulbrood	29	Sac Brood	1
European Foulbrood	11	Not Diseased	9

Annual registration of beekeepers is required for purposes of controlling disease.

	1947	1948
No. of Beekeepers Registered	8,000	5,000
No. of Beekeepers not Registered	1,500	1,700
No. of Hives Registered	64,000	52,000
No. of Hives not Registered	13,000	18,000

EXTENSION

There is still a considerable demand for information about beekeeping through lectures, meetings and field days. This Branch provided speakers for 52 such occasions.

Bulletins and correspondence are used in answer to inquiries about beekeeping. Agricultural notes and radio broadcasts are prepared and released throughout the year.

BEEKEEPERS' ORGANIZATIONS

Local beekeepers' associations affiliate to form the Alberta Beekeepers' Association. The Provincial Apiarist is secretary of this organization. This arrangement is a valuable contact for a Branch with the industry.

INVESTIGATIONS

1. A disease or condition of wintered hives that results in them dying off gradually during the summer has been investigated. The adult bees behave as they do when paralysis is present. The brood shrivels and dries up. The process of hive depletion is slow but persistent. The condition appeared to spread through two apiaries in the Winfield district. It has been observed in isolated cases elsewhere.

No causative organism was identified. No remedy has been found. Further investigation and experimentation is planned.

2. A test to determine the effectiveness of honey bees as pollinators of alsike and altaswede clovers was undertaken in conjunction with the Field Crops Branch. (See report of Field Crops Branch.)

Observation and counts on the honey bee and wild bee populations were made periodically during bloom. These counts were made for 10-minute periods on nine square feet close to cages which excluded bees. The average honey bee population varied from three to five, and the wild bee population from one to two, throughout the blooming period.

This was not a dense population of honey bees on the blooms, yet the seed yield of alsike outside the cages was at the rate of 463 pounds per acre compared to 24 pounds per acre inside the cages. On altaswede, the yields were 375 pounds and 23 pounds. It should be noted that the wild bee population seemed considerable, being 30% to 40% of that of the honey bees.

3. A preliminary study of the cost of producing honey in Alberta was made. The survey covered a small sample from all areas of the Province and included apiaries of from thirty to eight hundred hives.

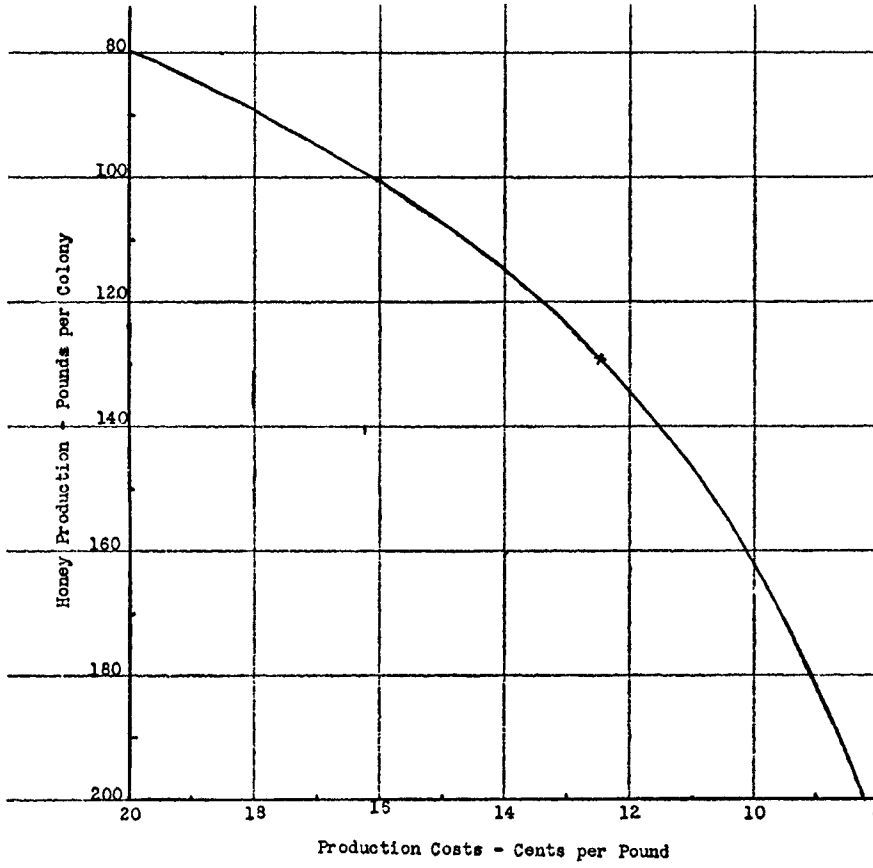
It was found that the average investment per hive was $24.50. This includes buildings, trucks, hives and equipment.

The cost of operating bees on a per hive basis for the year 1948 is shown in the following table; it includes production only —packaging and selling costs are not included.

Interest and Depreciation	$3.02	Bees and Queens	$6.12
Labour	4.40	Trucking	1.22
Miscellaneous (feed, power, rent, taxes, flood, disease)	1.40	TOTAL	16.16

From these figures it appears that the average cost per pound for a hive that yielded 100 pounds of honey was 16.2 cents per pound in 1948. However, it costs but very little more to operate a hive that produces more than 100 pounds per hive, so that the cost per pound goes down as the yield per hive goes up. The accompanying graph shows the cost per pound of producing honey as the yield per hive varies.

It may be noted that at the average production this year of 129 pounds per hive, the cost of producing honey would be 12.5 cents per pound.



Graph showing average cost (cents per pound) of producing honey in Alberta in 1948 in relation to average yield per hive.

REPORT OF THE SCHOOLS OF AGRICULTURE BRANCH

O. S. LONGMAN, Superintendent

GENERAL

The two Schools of Agriculture and Home Economics operated by the Department at Olds and Vermilion were utilized to full capacity during 1948. A total of 188 graduates received diplomas in Agriculture and Home Economics at closing exercises in April.

	Olds	Vermilion	Total
Diplomas in Agriculture	71	59	130
Diplomas in Home Economics	31	27	58
	102	86	188

More students applied for admission for the 1948-49 course than could be accommodated. While only students who were eighteen years of age or over were admitted, fifteen applicants for the course in Agriculture and three for the Home Economics course were refused admission. Enrolment figures for the 1948-49 school term were:

	Olds	Vermilion	Total
First Year Agriculture	56	61	117
Second Year Agriculture	41	42	83
Two-in-One Agriculture	35	24	59
	132	127	259
First Year Home Economics	36	34	70
Second Year Home Economics	13	15	28
Two-in-One Home Economics	17	17	34
	66	66	132
Totals	198	193	391

The Minister of Agriculture announced during the year that a third School of Agriculture would be built at Fairview. Due to shortages of materials and other factors, the building of this school was not begun during 1948, but it is expected that it will be started in 1949.

The plan for improving the buildings at the Schools was continued this year. At Olds a new mechanics building was provided through the purchase of a hangar from the Air Force Station at Bowden. A central heating system was installed and a number of the campus buildings were stuccoed. The School at Vermilion was connected to the water and sewage systems of the Town of Vermilion. A number of buildings were stuccoed and classrooms were redecorated.

There were a number of changes in the staff, but it is becoming easier to secure replacements. It is to be hoped that more permanency can be secured in the staff as the effects of the war diminish.

The schools were utilized continuously for a period of about five weeks during July and August. These institutions provide

excellent accommodation for conventions, short courses and similar events. It is hoped that as the years go on, greater use may be made of these facilities during the summer months.

The policy of utilizing officials of the Department of Agriculture to give lectures to the students was continued. This policy provides an opportunity for the students to become acquainted with officials of the Department of Agriculture.

There are several problems of importance facing the Schools of Agriculture. Some of these have arisen as a result of the war, while others are products of the times. Among the problems are the subject matter of the courses, the uniformity of courses at each school, the utilization of the schools' facilities for a longer period, the effective utilization of the staff during the summer months, and the integration of the Schools of Agriculture into the general educational pattern of the Province. Solutions to these problems are required in order to allow the Schools of Agriculture to best serve the people of the Province.

REPORT OF SCHOOL OF AGRICULTURE AND HOME ECONOMICS, OLDS

F. N. MILLER, Principal

The 1947-48 term was brought to a close on April 7th, when diplomas in Agriculture were awarded to 70 men and one woman, and diplomas in Home Economics to 31 women.

The address to the graduating class was delivered by Rev. G. H. Villett, Principal of Alberta College, Edmonton. The prizes were presented by R. M. Putnam, Assistant Deputy Minister of Agriculture. The diplomas were presented to the students by the Principal, who was assisted by C. E. Yauch, Instructor in Field Husbandry.

The valedictorian was Roy B. Pestell, of Nanton.

Following is a list of scholarships awarded to the students of the 1947-48 school year:

The Alberta Surplus Wheat Board Moneys Trust Scholarships each of $100.00, tenable at the University of Alberta when they register for a degree course—Roy I. Woodward, Irvine; Eric A. Longeway, R.R. 2, Calgary; Elmer C. Wambold, Aldersyde; Rose-Marie Fontaine, Edmonton; Eve E. Allan, Alix.

A scholarship to the value of $75.00 to the student in Agriculture standing highest in the work of the first year—Kenneth O. Stewart, Strachan.

A scholarship to the value of $75.00 to the student in Home Economics standing highest in the work of the first year—Erlene E. Boe, Clive.

The O.S.A. Girls' Alumnae Scholarship of $50.00 to the student in Home Economics who made satisfactory progress in academic work and who also made contributions of value to the athletic, social and literary life of the school—June McKnight, R.R. 2, Calgary.

The O.S.A. Experimental Union Scholarship of $50.00 awarded on the same basis as the above—Robert Boulton, R.R. 1, Lousana.

The Alberta Women's Institute Scholarship, also of $50.00, for a first year student in Home Economics who had a creditable scholastic record, who made valuable contributions to the life of the school, and who displayed talent for leadership—C. Joan Milson, Winfield.

The Alberta Seed Growers' Co-operative Scholarship of $50.00 to the student in the first year of the agricultural course receiving the highest standing in the plant science division—Lynn D. Orr, Macleod.

The Alberta Turkey Breeders' Association Scholarship of $50.00 to the student in the first year of the agricultural course receiving the highest standing in poultry—William A. Crook, Pincher Creek.

The Canadian Legion of the British Empire Service League (Alberta Provincial Command) Scholarship of $100.00 to a student, a veteran or son or daughter of a Legion member, entering their second year of either the Agricultural or Home Economics course. The award is made by the Staff, together with a representative from the Legion Education Committee. This scholarship is awarded for good scholastic standing, plus qualities of diligence and leadership. Winner for the 1947-48 term—Erlene E. Boe, Clive.

Thirteen graduates are presently in attendance at the University of Alberta from the 1947-48 class. One graduate is in attendance at Laval University in Quebec.

ENROLMENT

No students under 18 years of age were admitted to the course in Agriculture. It was necessary to refuse admission to approximately fifteen 18-year-old applicants for this course because of limited accommodation. In the course in Home Economics it was possible to enrol all but three applicants. In August, applications of thirteen students were transferred to the Vermilion School of Agriculture.

Following is the enrolment at the Olds School of Agriculture and Home Economics for the term 1948-49:

First Year Home Economics	36
First Year Agriculture	56
Two-in-One Home Economics	17
Two-in-One Agriculture	35
Second Year Home Economics	13
Second Year Agriculture	41
Total	198

Agriculture ..... 132 Home Economics 66

One student enrolled in the Home Economics course received her diploma in Agriculture from the O.S.A. in 1916. This student is also a graduate of the University of Alberta, receiving the B.A. degree with that institution's first graduating class. Mrs. E. Nelson, of Cluny, is living in the dormitory with the other students and is thoroughly enjoying it.

Six ex-service men are again registered for the course in Agriculture.

The average age of the young women enrolled in the Home Economics course is 18.7 and the average age of the men is 19.7 years.

Following is the educational standing with which the present students registered for their courses:

Below Grade VIII	Grade VIII	Grade IX	Grade X	Grade XI	Grade XII
1	17	36	42	53	48

One student has a B.A. degree and another has had Normal School training.

Two students, one in the first year and one in second year Agriculture, had to discontinue their course in November due to illness at home. It was then too late to make satisfactory replacements.

It is interesting to note that 47% of the Agricultural students in attendance are former members of Junior Farm Clubs. Of the students in Home Economics only 35% have held membership in Junior Farm or Homemaker Clubs.

STAFF CHANGES

Miss Gwen R. Caverhill, B.Sc., who was instructress in Household Administration and Laundry, was transferred to the position of Dean of Women and Dietitian to replace Miss G. E. M. Burwash, who resigned from that position to be married.

Mr. Don R. Macpherson, B.Sc., of Delia, was appointed Instructor in Animal Husbandry to replace Mr. H. L. Christie, who was unable to leave his farm at Cardston for the winter season. Mr. Macpherson was Dean of Men and Instructor in Dairying and Poultry last year at the Vermilion School of Agriculture.

Mr. J. A. Groombridge, B.Sc., of Clyde, was appointed Instructor in Horticulture and Botany. Mr. Groombridge was transferred to Olds from the Provincial Horticultural Station at Brooks, where he worked during the summer.

Miss Elizabeth Guest, B.H.Ec., of Winnipeg, and a recent graduate of the University of Manitoba, was appointed Instructress in Household Administration and Laundry to replace Miss Caverhill.

It should be recorded that Mr. A. T. Kemp, who joined the Staff in 1922, passed away on April 27th in the Olds Municipal Hospital. Mr. Kemp's death was a great loss to the school as he was outstanding in his own field, having had a wide background and training in horticulture. He received his training on various estates in England and finally at the Royal Gardens, Windsor. He came to Canada in 1911, when he commenced work for the Forestry Station at Indian Head, Saskatchewan, and later the Experimental Farm at Lethbridge. Mr. Kemp graduated from the O.S.A. in 1916 and left for overseas shortly thereafter.

After returning from active service, Mr. Kemp attended the University of Alberta, from which institution he graduated in 1922. Mr. Kemp suffered variously through all the post-war years from wounds sustained during active service.

There never was any one with the interests and welfare of the O.S.A. at heart any more than Arthur Kemp. He served well.

SUMMER COURSES

The following courses, field days, conventions, etc., were held at the Olds School of Agriculture and Home Economics last summer:

1. The Alberta Federation of Home and School Associations' Convention—April 20-23.
2. Advanced Sewing Course—April 26 - May 1.
3. Leaders' Course for Garden Projects—April 27-28.
4. Dairy Field Day—June 26.
5. Junior Farm Club Leaders' Conference—June 28-29.
6. Short Course for Dormitory Supervisors and Cooks—June 30 - July 3.
7. Junior Farm Clubs' Efficiency Week—July 5-10.

8. Farm Women's Week—July 12-17.
9. Convention of Women's Institutes Girls' Clubs—July 19-23.
10. O.S.A. Alumni Short Course and Reunion—July 26-28.
11. Rimbey Beef Calf Clubs—July 30.
12. Alberta Junior Farm Clubs; Semi-Final Contests—Sept. 23.

The Staff of the Olds School of Agriculture, together with assistants from the Department of Agriculture, again provided lectures and special demonstrations for these courses. During Junior Farm Club Efficiency Week four 4-H club members were again present from the State of Montana. The 4-H guests were as follows:

Miss Ruth Benson, Missoula County.
Mrs. Mary-Lou Noble, Stillwater County.
Mr. Francis Van Rinsum, Flathead County.
Mr. Burton Bosch, Blaine County.

Miss Margaret Kohl, Assistant 4-H Club Leader, accompanied the 4-H delegates.

Tests were given at the end of the Junior Club Week courses and scholarships of $75.00 each tenable at Olds or Vermilion in 1948-49 or 1949-50 were awarded.

EXTENSION WORK

Considerable assistance was again given to the Extension Service of the Department of Agriculture during the summer. Mr. M. W. Malyon did Herd Improvement testing work for the Dairy Branch; Mr. F. F. Parkinson, as usual, was used on farm machinery field days; Miss F. C. McIntyre and Miss G. R. Caverhill both worked for the Women's Extension Branch.

BUILDING AND CONSTRUCTION

The new Mechanics Building is now being used for classes in Building Construction and Farm Mechanics. The extra space so greatly needed in past years is now amply provided in this building. The construction of classrooms, shop laboratories, insulating and the entire sealing of the interior building was done by the Public Works staff under the direction and supervision of Mr. G. W. Carter, instructor in building construction and farm buildings. Mr. Carter is acting foreman of all building construction, maintenance and repair work.

A good start has been made on the installation of the central heating system, and it is estimated that the new Mechanics Building will be heated from the central plant by the end of January next. The central heating plant replaces the old Carpentry Shop and Seed House. The latter was torn down to make room for the heating plant, which is housed in a building 30' x 48'. The trusses for this building were taken from the prisoner of war camp at Lethbridge.

The Administration Building was stuccoed during the summer and several of the classrooms were redecorated. This has greatly improved the appearance of this building. The new wing of the Boys' Dormitory was also stuccoed. Fluorescent lights were installed in the two classrooms in the dormitory and in the library.

An oil shed 14' x 18' was also constructed to house the gas and oil being used by the farm and school tractors.

THE SCHOOL FARM

The school farm, consisting of approximately 600 acres, is still under the capable management of Mr. W. K. Ross. All crops grown are utilized as feed for live stock. As usual, a very large quantity of the milk, cream, eggs and meat required by the dormitory is supplied by the farm.

This spring was one of the latest on record here. Seeding was not commenced until May 21st and even then the fields were in rather poor condition. Pastures got a good start in the spring and held very well throughout the summer. Two hundred and sixty acres were seeded to barley, oats and oat greenfeed. The latter part of the growing season was very dry, so the yields did not measure up to those of last year. On the whole, however, the hay and grain turned out quite satisfactorily and yielded a good quality product. The oat crop threshed out to 9,253 bushels and barley 3,200 bushels. In addition, 70 tons of silage and 30 tons of greenfeed were put up. From 100 acres of hayland 140 additional tons of feed were stacked for feed for live stock.

The calf crop from the Aberdeen Angus, Shorthorn and Holsteins was good, and sales of these breeds through the year were very satisfactory. The local demand still remains high.

The hogs as usual sold well. No colts were raised this year. A few horses were sold during the year, but the demand was poor. At present, just sufficient teams are kept on the farm to use in connection with general chores.

As in former years, the poultry flock was disposed of in the summer after the short courses were over. Leghorn pullets as well as pullets of mixed breeds and some cockerels for a fattening and killing demonstration were purchased through the Poultry Branch. These are being used for class work during the regular school term.

Farm conditions have been very favorable this fall and the live stock are wintering satisfactorily.

Mr. Walter K. Ross, farm manager, was to judge horses at the Toronto Royal Agricultural Fair in November but was unable to carry through this assignment because of illness.

REPORT OF SCHOOL OF AGRICULTURE, VERMILION

N. N. BENTLEY, Principal

Through 1948 the Vermilion School of Agriculture continued to serve the people of rural Alberta as a centre of agricultural education and to offer encouragement through its facilities for the sponsorship of a wide variety of community interests.

In addition to the regular classes in vocational Agriculture and Homemaking which were filled to capacity, large numbers of people were attracted to the school premises by numerous special affairs and events. The effects of immediate post-war conditions were gradually being replaced by a greater degree of normalcy, in which the pattern of the School programme for the next few years could be observed to be developing.

The presence of some twenty-eight ex-service men and women featured the 1947-48 graduating class. In addition to these, classes for the past several years had included numerous other older students whose attendance at the School was directly attributable to the cessation of hostilities. When the 1948-49 term opened only four ex-service personnel were registered and a large majority of other students were much younger than in previous classes, a much greater percentage of them having been in attendance at Intermediate or High Schools the previous term.

The degree to which the general public has responded to any invitation to make use of services offered at the School and to attend special affairs or events has rendered a high degree of satisfaction to all concerned.

The Summer Short Courses and other services are becoming better known and established as regular features of the School programme. Improvements and additions to the facilities have attracted much favourable comment. The instructing, administrative, domestic and farm staffs, which had to be wholly recruited in 1945, now possess a considerable number of persons with several years' experience, which becomes a valuable asset in conducting the various activities of the School. All these factors appear to indicate considerable justification in the extent to which services offered by the School will command appreciation and receive support in the future.

THE 1947-48 TERM

Registration in the various classes were as follows:

Agriculture		Home Economics	
First Year	60	First Year	26
Second Year	32	Second Year	20
"Two-in-One"	28	"Two-in-One"	9
	120		55

At the end of the term, diplomas in Agriculture were granted to 59 students and in Home Economics to 27 students.

In addition to regular classroom work, the students engaged in a wide variety of extra-curricular activities organized by the Students' Council and supervised by members of the Instruction Staff. These included: Regular Saturday evening entertain-

ments of a literary or social nature; presentation of three one-act plays; a visit by a group of some 35 students and staff members to the Olds School of Agriculture; a curling bonspiel; a "Little Royal" parade; regular publication of a School paper and publication of a School yearbook.

A team of four students attended the Provincial Seed Fair at Calgary, where they assisted in judging the exhibits of wheat and barley.

Guest speakers who addressed the students during the term included: Prof. Edith C. Rowles, University of Saskatchewan; Mr. S. C. Heckbert, Vermilion; Mrs. E. E. Morton, Vegreville; Mr. W. N. Pidruchney, Mr. F. H. Newcombe, Mr. Geo. L. Godel, Mr. E. B. Martin, Dr. E. E. Ballantyne, Mr. E. E. Kitchen, Mr. W. G. LeMaistre, Miss Ruth Whaley, Miss M. K. Fraser, Miss B. J. Lewis—all of the Provincial Department of Agriculture.

The largest crowd ever entertained at a School function attended the "Little Royal" on April 2nd. Guest judges were Dr. J. W. Howe, Mr. B. T. Stephanson and Mrs. Helen Bentley from the University of Alberta, and Mr. W. E. Robinson, Supervisor of Manual Arts for the Edmonton Public School Board. Several Junior Farm Clubs from neighboring districts visited the show as a group.

Dr. R. D. Sinclair, Dean of the Faculty of Agriculture at the University of Alberta, was the guest speaker at the graduation exercises on April 9th. Mr. O. S. Longman, Deputy Minister, extended greetings from the Department of Agriculture, and Mr. R. D. Jorgenson, M.L.A., spoke on behalf of the Government.

Generous support in the form of scholarships and prizes was given by many organizations and business firms, who again established a record in the value of such awards made available to students for achievement in various phases of School activities.

WINNERS OF SCHOLARSHIPS WERE NAMED AS FOLLOWS:—

A: To members of the graduating class: (tenable at the University of Alberta).

The Alberta Wheat Board Surplus Trust, each $100.00:

Alfred Mathieu, Coronada; Arthur Fair, Paradise Valley; Donald Walker, Salt Prairie.

B: To members of the First Year Classes: (tenable in the Second Year Course).

The United Grain Growers' Scholarship, each $50.00:

Robert Cromarty, Provost; Desmond George, Grande Prairie; Lillian Slywka, Haight.

The Alberta Wheat Board Surplus Trust Scholarship, each $75.00.

Charles Osbaldeston, Fort Saskatchewan; Louise Sanford, Vegreville.

The Vermilion Board of Trade Scholarship, $50.00:

Stuart Church, Camrose.

The V.S.A. Alumni Association Scholarships, each $50.00: Robin Hopkins, Peace River; Shirley Lewis, Bon Accord.

The Alberta Seed Growers' Association Scholarship, $50.00: August Masson, Metiskow.

Craig Bros, Vermilion, Scholarship, $50.00: Terry Hines, Marwayne.

The Robt. Gardiner Memorial Scholarships, each $50.00: Walter Dietz, Galahad; Genevieve Ziegler, Vegreville.

The Alberta Turkey Breeders' Association Scholarship, $50.00: John Crookes, Airways.

The Alberta Women's Institutes Scholarship, $50.00: Kay Sanford, Vegreville.

Winners of the *Staff Medals* for having, in the opinion of the Staff, made the greatest contribution to the academic, social, athletic and literary life of the School were:

Second Year Agriculture: Robert W. Shopland, Rochester. Wm. S. Baranyk, Heinsburg.

Second Year Home Economics: Mable Rasmuson, Gwynne.

"Two-in-One" Agriculture: Douglas McGinnis, Westlock.

"Two-in-One" Home Economics: Betty Barr, Vermilion.

SUMMER PROGRAMME

The series of Short Courses held during the month of July was the principal feature of the Summer Programme. These courses, in 1948, were confined to ones which have become established during the past several years and no new attempt was made to extend their number or variety.

The problem of selecting additional courses that would extend the period of formal use of the School premises and facilities is not an easy one to solve. The dormitory is used to provide accommodation for those attending Short Courses and it is only practical to maintain the required staff if the sequence of courses is reasonably continuous. The attractiveness of employment on School Staffs would be enhanced if the summer programme was of sufficient duration to justify full-time services. But it is recognized that any educational service extended to farmers or to those directly associated with them would receive little support during the rush seasons of spring time and harvest. However, some possibilities that merit further attention in this regard include special training courses for particular employment opportunities such as creamery operators, poultry graders, fieldmen, appraisers, machinery servicemen, tailors, cooks, etc.

The *Summer Short Courses* presented were as follows:

Farm Women's Week—July 5th to 9th.

Junior Club Week—July 12th to 17th.

Boys' and Girls' Camp Week—July 19th to 24th.

V.S.A. Alumni Re-union—July 29th to 31st.

Members of the Instruction Staff for the regular courses conducted most of the lectures, demonstrations and other activities featured in the various Short Courses but special topics were dealt with and valuable assistance was given by personnel of the Women's Extension Service and Junior Activities Branch of the Provincial Department of Agriculture.

Farm Women's Week attracted a regular attendance of over sixty ladies, but casual visitors and parties visiting for special features of the programme added to the numbers each day. Guest speaker at the banquet was Dr. G. H. Villett, Principal of Alberta College.

Winners of general proficiency scholarships for the Farm Clubs and for the Girls' Clubs attended the Junior Club Week at the same time in 1948. This innovation which provided a much wider scope for organized social and entertainment activities proved highly satisfactory and was most popular with the eighty girls and over sixty boys in attendance.

Alberta Wheat Board Surplus Trust Scholarships tenable at either of the Schools of Agriculture for the regular courses in the amount of $75.00 each were awarded as follows:

Junior Crop Clubs—Sidney Pawlowski, Vilna.
Edmund McIntosh, Dimsdale.

Junior Live Stock Clubs—George Brebner, Spruce Grove.
Elwood Galloway, Clover Bar.

Girls' Clubs—Germaine Dusseault, Vimy.
Louise Ellett, Morinville.

The Boys' and Girls' Camp sponsored in connection with the Vermilion Agricultural Fair brought 53 boys and 58 girls to the School for a six-day period, during which the lectures and classroom exercises gave particular attention to preparing exhibits and judging at a country fair.

The V.S.A. Alumni Re-union again proved highly successful, bringing to the School many former students who returned for the first time since their student days. Guest speaker at the banquet, which was attended by 135 persons, was Mr. W. G. Malaher, Winnipeg. Mr. Malaher had been a member of the Instruction Staff for some twelve years prior to 1941 and for a considerable part of that time was Secretary of the V.S.A. Alumni Association.

Conferences and special functions held at the School during the spring, summer and fall included the following:

A reception and luncheon for Their Excellencies, the Governor-General and Lady Alexander on the occasion of an official visit to Vermilion, when some two hundred guests were received; the annual constituency conference of the Women's Institutes; a summer rally of district Junior Farm Club members; a visit of some fifty Junior Club members from the Wainwright district; the United Church Sunday School picnic; a Masonic Lodge picnic; the Vermilion, Wainwright and Vegreville District Teachers' convention; a visit by a party of some twenty-five Soil Surveyors from the three prairie provinces and western United States; a Pure-Bred Live Stock Show and Sale.

In addition to the responsibilities associated with the Summer Short Courses, conferences and special events outlined above, members of the Staff engaged in a variety of other activities. Miss Elford and Miss Hawrelak were employed by the Women's Extension Service during most of the summer. Mr. Acheson conducted a series of Farm Machinery field days arranged by the Extension Services Branch, and other instructors attended numerous rural field days, farmers' meetings and fairs as guest speakers and judges.

THE 1948-49 TERM

Applications from prospective students for the 1948-49 term were not definitely accepted until the first week in August, at which time it was evident that there were not likely to be many more than could be accommodated. All applications from eligible students for the Home Economics Courses received prior to the opening date were accepted and only twelve students, seventeen years of age or older, were refused admission to the Courses in Agriculture. Some fifteen applications from prospective students whose home addresses were located north of Ponoka but which had been submitted in the first instance to the Olds School of Agriculture were transferred to Vermilion.

During the early part of October a considerable number of applications were withdrawn for various reasons, but it was again quite evident that where there was any financial difficulty at home the girls' course was most easily forsaken. Other reasons revealed a greater interest in some form of training that would provide qualifications for remunerative employment.

The term opened on October 26th and as many students as could be accommodated were enrolled. Favourable harvest weather had prevailed during the previous months, with the result that only a few students did not register on the opening date.

Distribution of students according to classes was as follows:

Agriculture		Home Economics	
First Year	61	First Year	34
Second Year	42	Second Year	15
"Two-in-One"	24	"Two-in-One"	17
	127		66

The number of girls entering the "Two-in-One" Home Economics Course was the largest in the history of the School, but the percentage of girls returning for the Second Year work was smaller than in recent years.

Another point in connection with girls registering for the 1948-49 term was that for the first time since 1945 no difficulty was experienced in finding the required number of Home Economics students interested in part-time work in the dining-room of the Dormitory, in return for which they would be paid the amount of their board and room costs, and although no complaint respecting the increase in board and room charges from $27.00 to $35.00 per month was heard, it was quite evident that many of the students were required to give more consideration to personal expenses.

In spite of advice forwarded with other suggestions prior to the opening of the term, to the effect that there would be no provision for storage of student-owned automobiles and that the presence of such luxuries would not be viewed with favour, several students maintained automobiles at the School throughout the winter. A definite ruling in this regard would be worthy of consideration before the next term opens.

TEACHING STAFF

Several replacements and changes in the instruction staff were made for the 1948-49 term. Miss Margaret Lang, Dean of the Women's Residence and Instructress in Home Management and Handicrafts, resigned to accept a position as Director of Dietetics at the University Hospital in Edmonton. Mr. D. R. Macpherson was not again available for duties as Dean of Men's Residence and Instructor in Dairying and Poultry because of his marriage, and Mr. Thomas Kilduff, Instructor in Field Husbandry, returned to employment with the District Agriculturist Service. Mr. N. A. Moisey, Instructor in Blacksmithing, accepted employment with the Canadian Utilities. Mr. C. M. Hay, Science Instructor, resigned.

Miss Margaret Brown, who had been employed on the Dormitory Staff at Olds and Vermilion since 1937, resigned her position as Dormitory Supervisor because of her forthcoming marriage to Mr. D. R. Macpherson. Another vacancy on the dormitory staff was created by the retirement of Mr. P. A. Cross, who had served as Cook for some fifteen years. These vacancies necessitated particular attention to the selection of a Dietitian who would have to recruit a dormitory staff without experienced personnel in key positions. However, the appointment of Miss Doris A. Elford as Dietitian and Instructress in Cooking offered a happy solution, which has resulted in the dormitory continuing to operate in an efficient manner.

Instruction Staff arrangements for the 1948-49 term was as follows:

N. N. Bentley—Principal, Instructor in Farm Management.

Geo. W. Carter—Dean of Men's Residence, Instructor in Dairying and Poultry.

Miss L. M. Graham—Dean of Women's Residence, School Nurse and Instructress in Home Nursing.

Miss D. A. Elford—Dietitian, Instructress in Nutrition and Cooking.

J. L. Kerns—Farm Superintendent, Instructor in Animal Husbandry.

J. E. Hawker—Instructor in Horticulture, Botany and Mathematics.

S. C. Acheson—Instructor in Farm Mechanics, Motors and Machines.

L. Blades—Instructor in English, Public Speaking and Community Organization.

D. C. Folk—Instructor in Farm Buildings, Drawing and Home Mechanics.

Miss M. J. Hawrelak—Instructress in Sewing, Textiles and Laundering.

Miss E. M. Curran—Instructress in Handicrafts and Home Management.

R. A. Harvey—Instructor in General Science.

K. M. Stone—Instructor in Field Husbandry.

Wm. A. Dixon—Instructor in Metal Work.

The arrangements whereby the School Nurse also assumed duties as Dean of the Women's Residence and the Dietitian instructs in Cooking and Nutrition are new and appear to be working out satisfactorily. Because the Cooking Instructress has heavy responsibilities and requires considerable time for supervision in the dormitory the "Apartment" and related student projects has been transferred so that now it is associated with Home Management rather than with Cooking. The direction and supervision of this work, which requires a great deal of time outside of regular classroom hours, is now a part of the duties assigned to the Instructress in Home Management. This arrangement likewise appears to be quite satisfactory.

One deficiency which continues in respect to the present staff is the absence of a suitably qualified instructor to take charge of the formal physical training classes and organized sports. In view of the importance of such activities, it is recommended that this deficiency be provided for at the earliest opportunity. In the meantime, some of this work is being conducted by several of the staff members, as well as two students who have had some training with the Health and Recreation Branch of the Department of Education.

THE SCHOOL FARM

Mr. J. L. Kerns, B.Sc., Instructor in Animal Husbandry, continued in charge of the Farm, where the primary objective is to provide live stock and live stock management studies for classroom purposes. A large part of the meat, eggs, milk, cream and vegetables required by the Dormitory were produced on the farm, and students made special studies of the production practices being followed.

Farm sales to the Dormitory were:

Milk and Cream	$3,552.89
Eggs	377.27
Meat	4,213.29
	$8,143.45

Other farm sales included provisions to classrooms, milk and eggs sold to staff families living on the campus, live stock sold for slaughter and the sale of pure-bred live stock. Total farm sales amounted to $15,724.36.

In order to relieve Mr. Kerns of much of the details related to the day-to-day conduct of routine farm work and to allow him to devote more time to projects directly related to classroom studies, Mr. Roy Dibben, a V.S.A. graduate with some ten years' experience as a farmer in the Vermilion district, was engaged as foreman. With this arrangement in effect and the general farm programme well established, it is now proposed that some considerable attention be devoted to a number of farm management and live stock feeding demonstrations. Thus, the farm would be employed to a greater extent as a laboratory for the study, testing and demonstration of farm practices. It must be pointed out, however, that this use is intended for "classroom" rather than for "research" purposes.

THE SCHOOL GROUNDS AND BUILDINGS

The rather intensive programme of construction and reconditioning on the School premises begun in 1945 was continued in 1948, with the result that except for completing some projects immediate needs are reasonably well met.

The connection of water and sewage services at the School with the newly-installed systems in the Town of Vermilion was completed. The School is now served with water from the Town well, which is much softer and contains less iron than that which was formerly used, and the septic tank with overflow located at the south-west edge of the grounds has now been eliminated. All the School buildings and staff residences on the campus are now served with these facilities.

Other projects carried out by the Department of Public Works included:

Stuccoing of the College and Agronomy Buildings.

Painting the roof and trim on the College Building.

Installation of an interior stairway to the second floor of the Agronomy Building.

Removal of the annex on the Principal's residence.

Insulating and stuccoing residences occupied by the Principal and the Farm Superintendent.

Installation of cement sidewalks in front of the Dormitory and between the Dormitory and College Buildings.

Enlargement of the root cellar.

Transfer, in sections, of part of one of the Army "H" Huts to form a farm machinery shed, a machinery repair shop and a sheep shed.

Redecorating of the storerooms and halls serving the Dormitory kitchen.

Re-finishing of work surfaces and tables in the Science Laboratory.

Laying linoleum throughout the fourth floor of the Girls' Dormitory.

Removal of the Herdsman's residence from the south-east corner of the playground to a less obtrusive location.

Because student rooms in the Dormitory are only serviced with electric light located in the ceiling, some re-wiring to provide electrical outlets in the walls and so enable the use of desk lamps and student-owned radios is badly needed.

Installation of a system of bells in the various classroom buildings to announce the beginning and ending of class periods should be made as soon as possible.

Further progress was made during the summer in improving the general appearance and condition of the lawns, flower beds, ornamental plantings and garden. A new small orchard was planted to replace the old orchard, which had been destroyed by neglect and disease. Attention to these features of the School premises may now be reduced to maintenance and minor alterations.

A most encouraging result of the work expended in recent years was the very considerable number of visitors attracted from day to day to observe the grounds, gardens and field crops demonstration plots.

REPORT OF JUNIOR ACTIVITIES AND YOUTH TRAINING

G. S. BLACK

The past year has again shown an increase in membership and the number of clubs enrolled. Beef Feeding Clubs continue to remain the most popular as new high price levels were reached. Dairy Clubs also continue to increase as the supply of Dairy calves from the Edmonton Milk Shed has materially increased. Swine and Poultry Clubs are not popular and are not holding their own. On the whole, club work is becoming more and more a part of the agricultural programme and much serious thought is being given to rural youth education.

Beef Feeding Club regulations were revised; giving clubs alternatives in the matter of pro-rating, which we believe will eliminate opposition to this method of selling.

Summer camps were well attended and short courses and rallies continue to become part of the club programme. The Club Leaders' Conference was held at Olds this year and, with a greatly increased attendance, was favourably received.

Achievement Days in Live Stock Clubs, coupled with the Provincial Junior Show of dairy calves at Red Deer, were well and enthusiastically attended. Grain Achievement Days were either of high calibre and well patronized or very poorly attended. There were no medium fairs.

Alberta Junior Club teams at the National Contests, Toronto, made a worthwhile showing, although they did not win a first in the Judging Contests. In the exhibiting of grain, Alberta Juniors had outstanding wins in both the wheat and oat section. John Boulton of the Abee Oat Club and Jack Allsop, formerly a Junior Club member, won the championship in oats and wheat, respectively.

The Canadian Council of Boys' and Girls' Club Work held its annual meeting in Quebec. Good discussion took place and plans continue to be made to further club work across Canada.

Mr. C. S. Clark, a University third-year student and former club member, was employed during the summer. His work was efficiently done and appreciated very highly.

The following is an analysis of each project:

ALBERTA'S JUNIOR CLUBS, 1948

	No. of Clubs	Membership
Beef	88	1,833
Dairy	25	574
Swine	2	23
Poultry	1	10
Wheat	38	673
Oats	22	359
Barley	28	494
Forage	13	146
Food and Clothing	110	1,340
Total	327	5,452

ALBERTA JUNIOR CLUBS
(1938 to 1948 Inclusive)

Project	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
Swine	24	30	30	22	21	13	12	7	1	3	2
Beef	11	22	26	27	38	37	42	47	56	73	88
Dairy	10	10	12	9	10	10	11	15	14	18	25
Poultry	—	—	—	—	6	8	—	—	2	3	1
Wheat	71	74	78	54	40	23	19	21	34	42	38
Oats	15	23	18	21	22	30	26	19	24	17	22
Barley	8	7	8	8	33	30	26	15	16	26	28
Flax	1	1	2	1	—	2	—	—	—	—	—
Potato	2	—	1	2	—	3	3	2	8	2	—
Forage	—	—	—	—	—	13	19	14	10	15	18

BEEF CALF CLUBS

The Junior Beef Calf Feeding project continues to be the most popular of the Junior projects. Members of these clubs have received consistently high prices for their beef calves, resulting in profitable returns for the winter's work. Breeding Clubs, on the other hand, allow for the establishment of a small herd of choice cattle, but as this is a long-time procedure and no sale of cattle involved, such clubs are more difficult to establish. Members of both these types of clubs receive instruction in the fundamental principles of feeding, care and management, as well as proper conducting of meetings, etc. Rural youth enrolled in such projects materially benefits from club activities, benefitting to a greater degree than formerly. Commercial concerns continue to support these clubs and are largely responsible for the high prices bid for the member's calf. Although the quality of the animal offered is better each year, the elimination of or improvement of the lower grades would do much to enhance club work.

The judging at local Achievement Days or combined groups of Achievement Days continues to be a problem. Undoubtedly, the ideal system would permit one judge to pass judgment at all fairs. Time will not permit of such, and the establishing of uniformity of award placing continues to be a problem. Messrs. Mead and Noad, of Olds, placed a large number of such fairs and were in a great measure responsible for establishing the classifications decided upon. Group judging was again used and in the big majority of cases was well received. The establishment of this new method of placing awards must of necessity require considerable time for participants to become familiar with such. Gradually, the member and his parents are becoming more concerned with the educational value of club work and less concerned with the awarding of championships.

DAIRY CALF CLUBS

This type of club continues to make satisfactory progress. The increased number of clubs is due in no small way to the concentrated publicity given Junior Club work and to an extensive radio, press and personal campaign conducted for the securing of more calves for Junior Clubs last fall. The number of calves secured permits of organizing more clubs annually, and many members are now establishing good dairy herds which otherwise would not be done.

The Provincial Junior Dairy Calf Show was again held in conjunction with the Red Deer Exhibition. Co-operative sponsors were the Alberta Dairymen's Association, Red Deer Exhibition, and the Department of Agriculture. The judging of these calves has become a highlight of this Exhibition and continues to create a grand display and is responsible in a large measure for the interest being taken in Junior Dairy Calf Clubs.

Championship awards were won by George Gibb, Jr., of the South Edmonton Club, and by Jim Brewster, of the Bowden Calf Club, who stood first with his yearling Holstein.

The following are the Junior Dairy Calf Clubs in operation:

Acme
Barrhead
Bearspaw
Bentley
Bowden
Betchton
Darwell
Donalda
Didsbury
East Edmonton
Elnora
Erskine
Fallis
Holden
Lake View
Lethbridge
Olds
Red Deer
Ryley (Calf Class)
Ryley (Yearling Class)
Sedgewick
Smoky Lake
Springbank
Sundre
Vilna

The increased number of clubs has been possible due to the successful efforts of R. Dixon, of the Dairy Branch, and S. Clark, of the Junior Activities Branch, who last fall carefully canvassed a large portion of the Edmonton Milk Shed and through personal contact were able to secure a large number of dairy calves. Contact was continued through this office by circular letters and cards.

One member from each of the Junior Dairy Calf Clubs attended the Dairymen's Association Convention at Edmonton, as guests of this Association. A programme of live stock judging was held at the University Farm, and Miss Alice Bruce, of Didsbury, was the successful winner. A radio demonstration was given by two members of the South Edmonton Club. Arden Wingrove and Andrew Briggs gave a very instructive talk on phases of Junior Club work. In addition to attending the main part of the Convention, visits were made to milk plants within the city.

SWINE CLUBS

District Agriculturists report no increase in interest in Swine Clubs within the Province. This was once a highlight of Junior Club work, but no requests are being received for the organization of more Junior Swine Clubs. Vauxhall and Sundre are the only two active clubs in this connection. At present insufficient clubs are in operation to allow of members being sent to the National Council Contests at Toronto. It is an apparent genuine lack of interest, as no objections are voiced against the present regulations.

CROP CLUBS

Junior Crop Clubs continue to be successful worthwhile enterprises. The Field Crops Branch has again co-operated heartily in this work, particularly in the many phases that are strictly Field Crops activities. The magnitude of this work requires the full time of a man. District Agriculturists have again assisted in the judging of the numerous seed plots and at Achievement Days. A greater interest is being shown in exhibiting at the Royal Show by club members and many Achievement Days' exhibits were of an exceptional high calibre. I regret to report again that many of the Achievement Days leave much to be desired in the displays exhibited.

The membership fees of all Grain Clubs was increased to five dollars due to the high cost of seed. Sponsoring organizations again gave creditable assistance, not only in paying a portion

of the seed costs, but in prize awards, trophies and a portion of the expenses incurred at Junior Club Week, Club Leaders' Conference, being held at the School of Agriculture at either Olds or Vermilion.

Wheat Clubs continue to hold their own, while Oat Clubs show an increase. Barley Clubs maintained their big increase of the year previous, while Forage Clubs are barely holding their own.

Seed distributed to both organized and newly-formed clubs was as follows: Wheat, 1,548 bushels; Oats, 1,770 bushels; Malting Barley, 1,112 bushels; Feed Barley, 232 bushels; and Forage, 1,871 pounds.

ACHIEVEMENT DAYS

Fewer alterations of Achievement Days were necessary due to very few breaks in the weather. Attendance at such events was lower than anticipated and may be due to increased fall work on all farms. Much time and effort was utilized in having many excellent exhibits. The Beiseker Regional Junior Seed Fair was perhaps the outstanding event of its kind. The outstanding exhibit of the Acme Junior Wheat Club is being utilized at the Provincial Junior Seed Fair. Many districts are neglecting to attract the attention of the community in that they are not making worthwhile displays. Three samples were taken from each Achievement Day for the Provincial Junior Seed Fair held at Calgary.

Three hundred and eighty-five exhibits were shown at the Provincial Seed Fair in the Junior section, this being a major attraction. A full report of this event will be found in the report of Mr. J. E. Birdsall of the Field Crops Branch. It is interesting to note again that senior students from both Olds and Vermilion assisted in placing awards in the Junior classes. Their work has been very satisfactory during the past two years.

BOYS' AND GIRLS' CAMPS

These activities were held at Lloydminster, Vermilion, Vegreville, Red Deer, Camrose and Lethbridge in conjunction with their Agricultural Fairs. Supervision of such activities are done by the District Agriculturist and a programme of live stock and Field Crops activities is carried on. Housing facilities has been made easier by the use of former army huts and by the School of Agriculture dormitories. At Lethbridge, Camrose, Vegreville and Red Deer camps were improved by the granting of Service Clubs of their swimming pools. Suitable awards in the form of books are given as prize awards in various judging contests. Such camps continue to create an interest in the Schools of Agriculture.

JUNIOR FARM FIELD DAYS AND CLUB RALLIES

In addition to holding co-operative club Achievement Days in both grain and live stock, there is a growing tendency for Junior Clubs to hold inter-club rallies and visit points of interest within their district. Organized trips are also being taken by clubs to distant points of interest. The Drumheller, Morinville and Sangudo Clubs made a trip to the School of Agriculture at Olds and also to the Experimental Farm at Lacombe. Junior Clubs in the Morinville and Athabasca areas held short courses of one week's duration. Clubs in the Ryley area visited outstanding points of

interest at Edmonton. Claresholm and Nanton did likewise at Calgary. Practically all clubs have held one-day rallies, at which their own and neighbouring plots were inspected. Where geographical conditions permit, combined sport and work competitions were held at lakes or summer resorts.

INTERCHANGE OF CLUB MEMBERS

Again during the past summer four members of 4-H Clubs from the State of Montana were guests of the Alberta Junior Clubs during the Farm Week at Olds. A return visit was made to the 4-H Club Congress at Bozeman, Montana, by four Alberta members carefully selected for their club efficiency. This year's representatives were: D. McDonald, of Grainger, and E. McIntosh, of Dimsdale. The Girls' Clubs were represented by Miss B. Brown, of Nanton, and Miss G. Dusseault, of Vimy, Alberta.

JUNIOR CLUB WEEK

A slight alteration was made in the set-up of Junior Club Week. Members of Girls' Clubs usually convened one week at Olds, while the following week Boys' Club members attended. This year, however, club members from both Boys' and Girls' Clubs attended at the same time. Sponsors of the various clubs assisted materially by paying the cost of transportation and board and room expenses of the members of clubs they sponsor. A total of 159 members were in attendance at Vermilion and Olds for a full week's programme.

Scholarships are awarded annually, and the successful winners at the 1948 Club Week were:

Olds	Grain—	1. Allan Baker, Clive.
		2. Sulo Luoma, Trochu.
	Livestock—	1. Roger Wheeler, Ponoka.
		2. David Roger, Gem.
Vermilion	Grain—	1. Edmund McIntosh, Dimsdale.
		2. Sidney Pawlowski, Vilna.
	Livestock—	1. George Brebner, Spruce Grove.
		2. Elwood Galloway, Clover Bar.

AWARDS

Winners of Inter-Club Plot Competitions:

WHEAT, Department of Agriculture Trophy—Rockyford Wheat Club. OATS, Alberta Seed Growers' Association Trophy—Dixonville Oat Club. FEED BARLEY—Erskine Feed Barley Club. MALTING BARLEY—Holden Malting Barley Club. FORAGE CROP—Marwayne Forage Club.

Winners of Inter-Club Seed Exhibits at Junior Seed Fair:

WHEAT, Alberta Wheat Pool Trophy—Rockyford Wheat Club. OATS—Abee Oat Club. FEED BARLEY—Abee Feed Barley Club. MALTING BARLEY—Northern Valley Club.

Winners of Awards at Junior Seed Fair for Individual Samples:

WHEAT, Alberta Wheat Pool Trophy—Howard R. Roppel, Rockyford. OATS, United Grain Growers' Trophy and Gold Watch—Olga Pawlowski, Vilna. FEED BARLEY, Line Elevators' Association Gold Watch—John Brown, Cassils. MALTING BARLEY, Canada Malting Company Trophy and Gold Watch—Wallace Riddle, Carstairs.

Alberta Wheat Pool Shield for Wheat Club with highest General Efficiency Standing in 1947—Level Land Wheat Club.

Inter-Club Grain Judging Competitions—Won by Howard Roppel and Harvey Katterhagen of the Rockyford Junior Wheat Club, who placed second in the National Competition held at Toronto.

PROVINCIAL INTER-CLUB JUDGING CONTESTS

Semi-final contests were held at Olds and Edmonton during September in the Beef, Dairy and Grain projects. Four dairy, seven beef and eight grain teams competed at Olds, with the Didsbury Dairy, Hanna Beef and Rockyford Grain teams winning the semi-final contests. At Edmonton, eight Beef teams, nine Grain teams and two Dairy teams competed. Rosalind Beef, Ryley Dairy and Holden Grain Clubs won these semi-final contests.

Final contest awards were:

Beef—Hanna Beef Club: Gloria Robbs, James Robbs.
Grain—Rockyford Grain Club: James Miller, Melvin Heinzlmeir.
Dairy—Ryley Dairy Club: Charles Magneson, George Knudslien.

DOMINION CONTESTS

Ninety Junior Club members competed in the various projects at the Royal Winter Fair, Toronto, during the week of November 15th. Alberta teams did not win any first awards, although two individual members won individual high awards in their projects. Alberta stood as follows:

Girls' Clubs—Food Project, Second.
Clothing Project, Third.

Boys' Clubs—Beef Project, Fifth.
Dairy Project, Seventh.
Grain Project, Third.

Individual High Scores were:
Joyce Beaton, Food Project.
James Miller, Grain Project.

The following teams which stood second in the Final Contests are eligible for attendance at one of the Schools of Agriculture in July next:

Beef—Ross Gould, Rosalind;
Murray Langelle, Rosalind.

Dairy—Jim Clare, Didsbury;
Patricia Gibbs, Didsbury.

Grain—Marvin Giebelhaus, Holden;
Clayton Eberhart, Holden.

DOMINION GRAIN EXHIBITS

Alberta Juniors won first in Wheat and Oats in the Junior classes, with John Boulton, of Abee, Alberta, winning the Grand Championship for his sample of Larain Oats.

Twenty-one samples of Wheat were exhibited by Junior Club members and were awarded the first twenty awards as follows:

Section 1—Wheat, Spring (except Durum):

1st—Les Mason, Warner.
2nd—Ian Borwick, Drumheller.
3rd—William Weisgerber, Schuler.
4th—Don Huether, Carbon.
5th—B. Hendrick, Rockyford.
6th—John Rock, Drumheller.
7th—Rickie Sharp, Munson.
8th—Howard Roppel, Rockyford.

9th—Lois Olson, Drumheller.
10th—Marjorie Leiske, Beiseker.
11th—Burnitta Haase, Beiseker.
12th—Allen Stern, Beiseker.
13th—H. A. Carlson, Maleh.
14th—Ross Cole, Drumheller.
15th—Lloyd Halstead, Carbon.
16th—Melvin Heinzlmeir, Rockyford.
17th—Franklin Jensen, Trochu.
18th—Don Buyer, Carbon.
19th—Patrick Hagel, Beiseker.
20th—R. Haase, Beiseker.
22nd—William Boese, Swalwell.

In the Oat Section: Norman Boulton, Abee, stood first, and H. Mirus, Busby, stood second. Another Alberta club member, N. Frederick, of Busby, won a Regional Award in Oats.

REPORT OF RELIEF SETTLEMENT BRANCH

E. B. SWINDLEHURST, Acting Supervisor

With the introduction of the Relief Settlement Plan in Alberta in 1932, selected families who would otherwise be in receipt of direct relief were offered assistance for settlement on the land, with a view to their becoming self-supporting. Dominion, Provincial and Municipal Governments contributed, and the first settler proceeded to his location in August of that year.

The plan remained in operation until July, 1941, and the number of settlers placed during the nine years was 1,092. Of this number, 675 have for various reasons abandoned their venture. Some found that they were unable to adapt themselves to their new surroundings; others obtained more attractive employment as conditions improved, and with the outbreak of war several enlisted with His Majesty's Forces. Of the remaining 417 settlers, 277 have completed payment of the recoverable portion of expenditures made on their behalf, and 53 have made partial payments.

Repayments made by settlers now total $87,020.55, and an additional $87,110.17 has been recovered from sale of salvaged stock and equipment. Cash received during 1948 was $6,481.49. With reference to the 675 families abandoned during the course of the plan, 187 are classified as failures, 250 obtained other employment, 77 enlisted, and 161 were unable to continue as a result of sickness or for other reasons.

Under present conditions, it is not easy to appreciate the difficulties overcome by these families in their settlement attempts during the depression years. Starting with few possessions, their courage and steadfast purpose merits commendation. Until 1936, maximum assistance per family was $700.00. With this amount, stock and equipment had to be purchased and food necessities provided. Later, depending on the size of family, amounts varying between $700.00 and $1,000.00 were made available, but in very few cases was the maximum amount expended.

REPORT OF PROVINCIAL HORTICULTURAL STATION, BROOKS, ALBERTA

P. D. HARGRAVE, Superintendent

INTRODUCTION

The Brooks Horticultural Station harvested the heaviest fruit crop in its history in 1948. Approximately 28½ tons of fruit were sold, mainly apples and crabapples. A large quantity of seed from selected stock was kept for seed purposes. This is the first seed, in any quantity, that has been available for three years and will help greatly in bringing the propagation programme back to normal. The large fruit crop also assisted in the work of selection from seedlings and several promising trees were marked.

Excellent fall harvest conditions prevailed. This warm fall weather prevented root cellars from being cooled down sufficiently to prevent loss in quality of the potato crop. Two new fireplaces were built on the picnic grounds for the use of visitors to the Station. Six acres of land were levelled and prepared for use in 1949. Plans were laid for an overhead irrigation system to be installed at the Station in 1949. When this is completed a comparison can be made of the gravity and overhead systems of irrigation.

CLIMATE

The winter of 1947-48 was comparatively mild until the end of January. From then on below-zero temperatures with heavy snows were general until the 16th of April. At this time there was approximately 20 inches of snow on the level, with drifts from two to six feet. The break-up was very sudden and by April 22nd the snow in the fields was gone and the frost was out of the ground. The sudden thaw resulted in flood conditions. May was very warm, with comparatively heavy precipitation. June, July and August were average months, with a heavy rain on July 28th bringing precipitation above normal. September and October were exceedingly fine, with only .25 inches of precipitation. The first snow of the 1948-49 season, to remain on the ground, occurred on December 4th, although there had been traces of snow in November. December was very cold, and from the 8th to the 17th temperatures remained well below zero for both maximum and minimum readings. There was only about three inches of snow on the level at the end of December. The last killing frost of the spring occurred on April 26th and the first killing frost of the fall on September 25th. This gave a frost-free period of 152 days. The maximum and minimum temperatures and precipitation for each month are given in the following table:

Month	Maximum	Minimum	Average Maximum	Average Minimum	Precipitation
January	45	—9	31	15	—
February	41	—28	16	—4	1.37
March	44	—29	26	4	1.35
April	70	—8	44	21	.76
May	87	30	68	42	2.60
June	95	39	76	49	1.17
July	91	47	79	52	3.88
August	89	44	79	50	1.14
September	91	25	73	43	.19
October	78	19	66	30	.06
November	54	—1	41	21	.22
December	45	—26	15	—2	.50
Total precipitation for 1948					13.24

FRUIT

The winter of 1947-48 was one of the best on record from a horticultural standpoint. A heavy fall of snow stayed on the ground all winter. Temperatures were moderate, with few Chinook winds. The snow blanket kept the trees in good condition and little or no winter killing took place.

The spring planting period was of short duration, as a result of a quick change from winter weather to almost summer temperatures.

Planting conditions were ideal, although delayed by muddy soil at the start of the season. Unprecedented warm weather promoted rapid growth, thus putting an end to further digging and planting; a disadvantage to a number of growers.

As expected, the blooming of the various trees, bushes and shrubs was one of the finest yet seen. The weather being ideal for pollinization, a record crop of tree fruit was made possible. Even the native fruits in and out of their natural environment bore heavily.

At the Station and in the adjoining territory, trees of tender habits bore their first fruits, which were for the most part of good quality. The heavy crops of apples, plums and crabapples and their hybrids caused some concern, and precautions were taken to support the trees by bracing with wire, bolts and poles, yet in some cases branch and crotch injury was heavy.

It is of interest to note that a few of the so-called biennial bearers of fruit failed to produce a crop. This may be due to their established habit, rather than to climatic conditions. Small fruits, such as raspberries, strawberries, currants, etc., were in keen demand all season, and although a heavy crop was harvested supplies were inadequate.

In the apple and crabapple trial plots a few specimens showed promise and were tagged for further test. A Sapa and Sand-cherry seedling also were tagged, showing some merit in their respective plots.

No fireblight or other serious disease has as yet attacked the fruit trees on this Station.

SUGAR BEET TRIALS

Sugar beet trials were undertaken again. Poor stands were obtained and so weights and sugar percentages were so variable that no conclusions could be drawn.

VEGETABLE VARIETAL TRIALS

Vegetable trials this year were conducted in co-operation with Dominion Stations, the U.S. Department of Agriculture, and several State Bureaus. A very favourable growing season resulted in high yields, especially of tomatoes.

These vegetable trials included 522 varieties of beans, brussels sprouts, cabbage, cauliflower, corn, cucurbits, broccoli, peas, peppers and tomatoes. As in former years, the observations made from these tests have been summarized and are available for those interested.

Some of the highest yielding tomatoes were Redskin, which produced at the rate of 26.3 tons per acre; Early Chatham, Farthest North and Minnalta, all at approximately 24 tons per acre. The strain Early Chatham x Redskin Fl yielded at the rate of 32.4 tons. This is an excellent home garden tomato and with such a high yield may have commercial possibilities. Seventy-two strains of the Brooks selection of Red Cloud were grown in the plots to be chosen for seed production work.

New varieties of early sweet corn were tested with proven varieties, and one or two of these compared favourably with the older varieties. Kauffman corn, a very desirable strain developed in this district, took only 78 days to reach the edible stage. In the plots this year Seneca 60 was the only other variety to equal this time. A new variety, Purplecross, supplied by the Connecticut Agricultural Experiment Station, proved excellent in regard to flavour.

Twenty varieties of field corn were on trial this year. Of these, Assiniboine Mixed was outstanding, reaching maturity much earlier than the other varieties. Severe blackbird infestation at mid-season made observation exceedingly difficult.

No outstanding developments in peas were observed this year, but one variety deserving mention is Dwarf Tom Thumb, a better than average quality pea, which was ready for use July 4th, 49 days after planting. The beans were very promising until mid-season, when halo and bacterial blight cut yields noticeably. However, a great many varieties were quick-frozen before the disease had affected them. The earliest bean of quality was Black Valentine, which was ready for use 49 days after planting.

Trials on cabbage, cauliflower, brussels sprouts, peppers, eggplants, carrots, parsnips, turnips and several curcurbits were also conducted under very favourable conditions. Eggplants, peppers and cantaloupe have proven themselves quite adaptable to this climate. The peppers in particular gave an exceptionally high yield.

FOUNDATION VEGETABLE SEED PRODUCTION

In 1945, the Canadian Seed Growers' Association allocated 17 vegetable varieties to this Station for processing into Foundation Seed Stock. These included two varieties of corn, two of cucumber, 2 beans, 3 squash, 3 tomatoes, 1 cabbage, 1 carrot, 1 marrow, 1 pumpkin and 1 radish. The selection work in five varieties has now been completed, and it only remains for the Canadian Seed Growers' Association to grant Foundation status to the seed produced.

At the C.S.G.A. convention this year four varieties were added to our assignment and one was dropped. It is expected that several more varieties will be brought up to Foundation status this year.

POTATO FERTILIZER TRIALS

The results obtained this year from the potato fertilizer trials were valueless from an experimental and commercial viewpoint. For this reason they are not presented in this report. Results for the previous five years were presented in the 1947 report of the Station.

TOBACCO TRIALS

Tobacco plantings were again established so that the work undertaken in previous years could be continued. The plantings showed very promising results and matured well within the frost-free period. No attempt was made this year to cure the tobacco as no adequate drier was available.

HOPS

The trial hop yard was increased in size and again proved most promising. It had been expected that a drier would be constructed this year in order that the cones could be properly cured. It was decided to delay the construction of this drier until next year as plans of a small experimental drier that is being constructed in England will be available by that time. A small sample of each variety was sent to Wye College, England, to be analyzed and compared with hops grown there. The results of this test have not been received to date.

PROPAGATION

Owing to the poor fruit or seed crop for the previous three years, seedlings for trial and propagation were in short supply. However, a total of 3,855 apples, plums, cherries and hybrids of selected stock were planted in the trial plots. There were 6,400 seedlings of the various fruits lined out for propagating.

Ornamentals have been in keen demand, and by root divisions, cuttings and seed, a total of 760 were planted out. Further work in this field is progressing and should help bring the newer varieties to the interested public.

Thirty-four fruit trees were shipped in from various points, some for test and others as additional varieties.

Conifers are still on the short list and further propagation was carried out to meet the demand.

Owing to dry hot weather, during the budding season, the demand for scion wood was not as heavy as usual. However, all available root stock at the Station was used. With favourable results, this will produce material to assist the nurserymen, the demonstration orchard scheme, and the introduction of new varieties.

To speed up the propagation of hard woods, and hard-to-grow trees and shrubs, green cuttings or slips were taken in July and set in sand in the greenhouse. Fifty-nine varieties were tested and 50% took root. A true picture of this work will not be known until spring, as most cuttings calloused readily but did not root. Further work of this nature should be started earlier, as the greener cuttings rooted readily.

FROZEN FOODS

In the winter months of 1948 frozen fruit and vegetable varieties were scored by a tasting panel of technicians from commercial firms and the Department of Agriculture. From the results obtained by this panel, a table of recommended varieties, "Vegetable Varieties Suitable for Freezing", was drawn up for distribution throughout the Province. The following fruits and vegetables were found to have the highest scores:

Corn:
Kernel—Bancross
Golden Ste. C4-U-17
On the Cob—Bancross
Marcross C-6-13

Beans:
Green—Logan
Masterpiece
Wax—Dwarf Bush Lima
Lima—Pole Lima
Pole—Blue Lake
Washington Wonder

Peas:
Laxton's Progress
Thomas Laxton

Cauliflower:
Early Snowball
Snowflake

Brussels Sprouts:
Long Island Improved

Broccoli:
Purple Broccoli Cauliflower

Peppers:
Worldbeater
Windsor

Rhubarb:
Macdonald
Ruby
Valentine

Numerous new vegetable varieties were introduced to the trial plots this year. Altogether there were frozen, in the Station laboratory, 35 varieties of beans, 20 of peas, 19 of corn and 49 varieties of other vegetables, and 20 varieties of fruit.

For the first time at the Station, extensive work was undertaken on frozen desserts, prepared foods—both cooked and uncooked—samples of which will be presented to the 1949 scoring panel. This type of research is highly interesting, holding many commercial and home possibilities.

EXTENSION

The requests for horticultural speakers and assistance at field days, horticultural shows, Junior Club work and short courses, from the Station staff are heavy. During the year 46 meetings were attended by members of the staff. This is an increase over previous years. During the summer months the picnic grounds at the Station were in constant use with 10 organized field days and picnics. The grounds were used by local groups and visitors to the district when the weather permitted. A fruit and vegetable exhibit was prepared by the Station and displayed at the Lethbridge and Calgary horticulture shows. The display attracts widespread attention and is invaluable in bringing to the attention of the people of this Province the large number of varieties and kinds of fruit and vegetables that can be grown successfully here. Shrubs and seeds were shipped to girls' garden clubs. Demands for the newer introductions of nursery stock are heavy and during the shipping season 30 shipments of bud wood, grafting scions, and tree seeds were made. Nursery stock was supplied to the Olds and Vermilion Schools of Agriculture and approximately 25,000 tree cuttings were distributed to farmers in the Province. There is still a great need for horticultural publications to aid in the answering of correspondence.

DEMONSTRATION ORCHARDS

Due to a shortage of material no new demonstration orchards were established.

FARMSTEAD PLANNING

The Station is still unable to cope with the demands for farmstead planning and some assistance from the University has helped.

STRATHMORE SUB-STATION

The tree fruit crop at Strathmore in 1948 was the largest on record. Apples, crabapples, plums, apricots and pears gave excellent yields. Many new seedlings bore fruit for the first time and these were tested for quality. No apple or crabapple was found that was an improvement over existing named varieties. The pears did very well, and the day does not appear to be far distant when the people of Alberta will be able to grow their own high-quality pears. The outstanding feature at Strathmore in 1948 was the large crop of good quality apricots. The past few years has seen great progress made by the fruit breeders in developing an apricot both hardy enough to exist and of good enough quality to interest the fruit growers of Alberta. Budded stocks of the best apricots at Strathmore were moved to Brooks this year. A total of 7,631 whips and cuttings were moved from Strathmore to Brooks during the fall. This total included 3,934 plum seedlings, 1,109 apple and plum budded stock, 802 poplar cuttings, 166 laurel leaf willow cuttings, 340 apricots, 480 sand-cherry seedlings, 300 assorted seedlings and 500 apple seedlings. All additional material that appears valuable will be moved from Strathmore in the spring of 1949.

REPORT OF THE SURPLUS WHEAT BOARD MONEY TRUST

Edmonton, Alberta,
January 25th, 1949.

Report of the Board of Trustees of the Surplus Wheat Board money received by the Government of the Province of Alberta, from the 1916-1919 Canadian Wheat Board.

Members:

The Honourable D. A. Ure, Chairman.
Richard Ballhorn, Farmer, Wetaskiwin.
Arthur Pierson, Vice-President and Treasurer of the Independent Grain Company, Calgary.

I have the honour to submit the report for the year ending December 31st, 1948.

During the year the Board lost the services of the Honourable D. B. MacMillan, who took over the arduous duties of Minister of the Public Works Department.

A statement showing the receipts and expenditures is attached, together with a statement of Assets and Liabilities.

During the year the net receipts were $5,563.67, as compared with $5,445.11 for the previous year.

Payments during the year under review amounted to $8,149.75 as compared with $7,830.76 during the year 1947. Of this sum of $8,149.75 a sum of $6,194.75 was invested in Province of Alberta 3½% debentures, whereas during the previous twelve months $5,348.80 was invested in Province of Alberta Special Adjustment Coupons.

INVESTMENTS

Investments at the end of the twelve-month period, as shown on the attached balance sheet, consist of $66,000.00 of Province of Alberta 3½% debentures, $15,000.00 Province of Alberta 2½% Savings Certificates and $2,812.20 in Province of Alberta Special Adjustment Coupons.

MEETINGS

A meeting of the members of the Board was held on October 25th last, at which time the schedule providing for twenty-nine scholarships was again approved.

GENERAL

Since the Board instituted the policy of providing scholarships, a total of 198 scholarships have been paid, representing an expenditure of $16,485.30. These scholarships are awarded as follows:

Three scholarships of $100.00 each to members of the graduating class in Agriculture at each of the Provincial Schools of Agriculture, toward expenses of first year of the Agricultural Course at the University of Alberta.

Two scholarships of $100.00 each to members of the graduating class in Home Economics at each of the Provincial Schools of Agriculture toward expenses of the first year of the Course in Home Economics at the University of Alberta.

One scholarship of $75.00 for general proficiency in the first year of the Agricultural Course at each of the Provincial Schools of Agriculture toward expenses of the second year of the Course.

One scholarship of $75.00 for general proficiency in the first year of the Course in Home Economics at each of the Provincial Schools of Agriculture toward expenses of the second year of the Course.

To a boy and girl at the University Farm Young People's Short Course to assist in their first year at the Provincial Agricultural Schools, $75.00 each.

To the wniner at the Women's Institute Girls' Clubs Week held at Olds, for the purpose of assisting during the first year at the Provincial Agricultural School, $75.00.

Two scholarships of $75.00 each to members of the Girls' Clubs attaining the highest score during the Girls' Club Week held at the two Provincial Agricultural Schools, for the purpose of assisting during their first year at these Schools.

Four scholarships of $75.00 each to members of Junior Live Stock Clubs, and to members of Junior Crop Clubs, attaining the highest scores during the Club Efficiency Week held at each of the Provincial Agricultural Schools—a total of eight.

The members of the Board have continued to follow the policy of conserving the principal remaining in the Trust Fund by providing for expenditures from income only, which was adopted when we emerged from the depression years.

Respectfully submitted on behalf of the Board of Trustees.

D. A. URE,
Chairman.

TREASURY DEPARTMENT

Wheat Board Monies Trust Fund

Balance Sheet as at December 31st, 1948

ASSETS

Investments—	Par Value	Book Value
Province of Alberta, 3½% Debentures due:		
June 1st, 1950-63	$11,000.00	$11,074.37
June 1st, 1950-64	15,000.00	15,000.00
June 1st, 1950-65	1,000.00	1,000.00
June 1st, 1950-68	10,000.00	10,062.01
June 1st, 1950-69	29,000.00	29,000.00
	$66,000.00	$66,136.38
Province of Alberta Special Adjustment Coupons due June 1st, 1948-50	$ 2,812.20	$ 2,737.44
Province of Alberta 2½% Savings Certificates due September 1st, 1950	15,000.00	15,000.00
	$83,812.20	
Cash in Bank		2,521.52
Bond Interest receivable re Special Adjustment Coupons due June 1st, 1948-50		3,056.54
Accrued Interest		319.15
		$89,771.03

LIABILITIES

Trust Fund, December 31st, 1947	$89,151.21
ADD: Surplus for year 1948	619.82
Trust Fund, December 31st, 1948	$89,771.03

Statement of Receipts and Payments for the Year Ended December 31st, 1948

Bank Balance, December 31st, 1947		$ 5,107.60
Int. on $66,000 Prov. of Alta. Debentures	$2,205.00	
Int. on $15,000 Prov. of Alta. Savings Cer.	375.00	
Int. on Bank Balance	49.30	
Int. receivable—Special Adjustment Coupons due June 1st, 1948	1,528.27	
Redemption June 1st, 1948, Special Adjustment Coupons purchased (book value)	1,406.10	5,563.67
		$10,671.27
Deduct Payments:		
University of Alberta—Scholarships	$ 400.00	
Vermilion School and Farm—Scholarships	825.00	
Olds School and Farm—Scholarships	600.00	
P. W. Johnson—Honorarium	100.00	
A. Pierson—Meeting expense	10.00	
R. Ballhorn—Meeting expense	20.00	
Investment: $6,000 Prov. of Alta. 3½% Debs. due June 1st, 1963, at $101.75	6,105.00	
Accrued Interest Purchased	89.75	8,149.75
Bank Balance, December 31st, 1948		$ 2,521.52

S 135 A33 1948
ALBERTA DEPT OF AGRICULTURE
ANNUAL REPORT OF THE
DEPARTMENT OF AGRICULTURE OF
SERIAL MI 39747548 SCI

Date Due

LTURE-&ANNUAL-REPOR<39747548-------

UNIVERSITY LIBRARY

Alberta. Dept. Agr. 147032

S 135 A33 1948
Alberta. Dept. of Agriculture.
Annual report of the
Department of Agriculture of
39747548 SCI

147032